POPULATION TODAY

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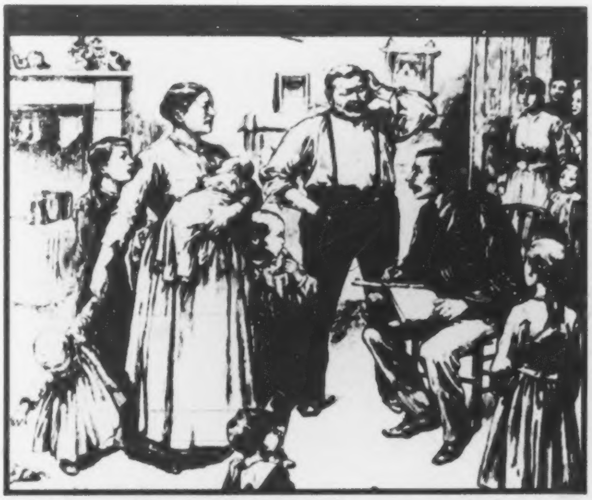

Courtesy of U.S. Census Bureau

"Thank you, Miss, but the Bureau has no category for enumerating impossible little brothers." (See page 3.)

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FROM THE EDITOR'S DESK

Here's a question for statistical junkies everywhere. What's the *least* valuable demographic measure you've ever had occasion to use?

Measures like sex ratio or birth rate or total fertility rates are essential for demographers. But somewhere along the line, the scores of measures available for deployment get increasingly hazy. Some contenders:

The general fertility rate (births per 1,000 women of childbearing age) is merely an appetizer; most people leap straight to the main course of total fertility rates and leave it at that. The U.S.'s general fertility rate was 65 in 1986, by the way.

The net reproduction rate (average number of daughters born to a woman, taking women's mortality rates into account as well as their fertility) is a valuable measure of fertility. The U.S.'s is about 0.9, but good luck obtaining this rate for nearly all other countries in the world.

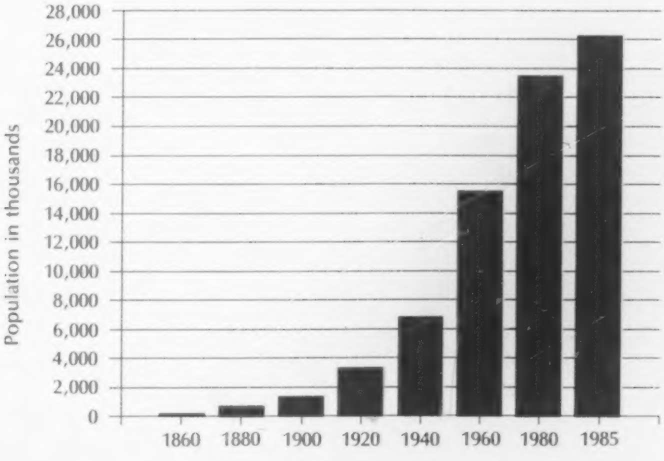
The remarriage rate, probably the most abstruse of them all, measures the number of remarriages per 1,000 population at risk, so to speak (the widowed and divorced). Simple so far, but does it go up and down? And when it does, what kind of grand demographic picture does one obtain?

Beats us. Of course, one person's bafflement is another person's research grail. If you have strong feelings (pro or anti) about the above measures, or have other candidates, let us know.

—Art Haupt

SPEAKING GRAPHICALLY

California from 1860 to 1985



Source. Leon F. Bouvier and Philip Martin, *Population Change and California's Education System*, Population Reference Bureau, Inc., 1987.

California's migration-fueled population growth since 1940 (380 percent) exceeds the growth of many countries (including Tanzania, which had about the same population as California in 1940, but has grown to only 23.5 million today).

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Slightly Shrunk, Census to Proceed

U.S. Census Bureau/Mark Mangold

The Census's form-reader machine will have fewer questions to scan.

The latest round in the controversy of the Office of Management and Budget's (OMB) proposal to eliminate 30 questions from the 1990 U.S. Census is over. A review of the aftermath suggests that there were no winners.

The OMB's proposals (see the October issue of *PT*) were greeted with an outcry from planners, demographers, and many users of census data, as might have been expected. On Sept. 16, OMB backed off from its original proposal, restoring nearly all of the proposed deletions. Major census questions such as those on children ever born, a primary source of fertility analysis, and residence five years ago, an important source of migration data, have been preserved.

But in what many see as a face-saving measure, three housing questions have been ordered dropped. Questions H16, H17, and H18, which gathered data on type of heating equipment, type of heating fuel, and the cost of utilities, have been eliminated. These data have been used for many decades to study shelter costs and to gauge the impact of heating fuels upon natural resources.

Housing data received a second body blow when seven items were moved from the "short form," which canvasses 100 percent of U.S. households, to the "long form," which is sent to a sample. Information items such as number of rooms and value of dwelling (see box) will now appear only on the long form.

While housing data obviously suffered a worse fate than population data, the OMB also imposed a more serious constraint: the limitation of the size of the sample population which will receive the long form to 10 million households. Previously, about 16-17 million households were scheduled to provide answers to the sample questions. The census is designed so that all U.S. households need only respond to "basic" census questions such as age, race, and marital status. The more detailed items have been sent to about 1 in 6 households, a sampling percentage designed to provide data for smaller geographic areas such as cities or counties at the lowest possible cost and "respondent burden."

Respondent burden is one reason given by the OMB for new restrictions on the nation's decennial data gathering. In this connection, the OMB is fulfilling its role as the enforcer of the Federal Paperwork Reduction Act. This rationale would seem to be contradicted by the Commission Report that led to the passage of the Act itself. In its report, the Commission on Federal Paperwork concluded that the once-in-10-year burden was "moderate," noting that the short form census sent to all households took about 15 minutes to fill out and the long form sent to about 20 percent of households in 1970, about 40 minutes. The Commission also cited the fact that the vast majority of households now receive the census on a mail-out, mail-back basis. With this method, a householder may fill out the form at a convenient time and need not accommodate the possibly inconvenient visit of an enumerator.

Questions Deleted from All Census Forms

H16. Type of heating equipment
H17. Fuel used for heating water
H18. Yearly cost of utilities and fuels

Questions Moved from 100-Percent Form to Sample Form

H3. Number of rooms in housing unit
H4. Presence of complete plumbing facilities
H5. Whether housing unit is part of a condominium
H6a. Is housing unit on ten or more acres?
H6b. Whether business or store is on property
H7. Presence of telephone
H9. Value of home (if buying)
H10a. Monthly rent
H10b. Are meals included in rent?

The reduction in the size of the sample population slated to receive the long form may be the more serious blow. Although Census Bureau officials believe that most of the more detailed tables will still be published, the large increase in the sampling error will cause significant problems for analysts. It is too soon to estimate the full extent of the damage, but serious problems could arise if data required for Federal programs and voting rights legislation are jeopardized. The problem could be more acute in the more densely settled census tracts since the OMB also set a maximum sample of 1 in 20 households in those areas (1 in 2 is allowed for more sparsely populated areas).

The Census Bureau reaction at present has been to accept the restrictions, an unavoidable position given the time available between now and the Census "dress rehearsals" in 1988 to be conducted in Sacramento, Calif. and rural Washington. Census topsiders have stated that they can "live with" matters as they stand "for 1988."

(This report is based upon conversations with officials; some of the provisions could have changed since that time and some judgments of their impact are necessarily preliminary.)

—C.H.

What's Up in Kenya? (Besides Population)

That Kenya has one of the world's fastest-growing populations is an often repeated story. The population will double from the current 22.4 million to 44.8 million in the next 18 years if the 3.9 percent annual population growth rate holds steady.

Yet there are some hints that things are changing. Kenya's President, Daniel Arap Moi, and Vice-President, Mwai Kibaki, have both recently put population on the top of their personal agendas. The Government has just launched a renewed campaign to increase the "awareness of the *wananchi* [citizenry] about the relationship between the growth of population on the one hand and economic progress on the other."

Of course, information alone will not solve Kenya's problems. As the Vice President has noted, Kenya has before it the "mighty task of bridging the gap between awareness and practice."

Is there any progress to report? The national statistics are not too encouraging – contraceptive prevalence is slowly increasing and currently stands at 20 percent of eligible women. And the government family planning program is not very effective in recruiting or keeping family planning clients. However, there are some smaller scale, private family planning programs under way which demonstrate that Kenyans are receptive to family planning if they have access to appropriate, well-run services.

Chogoria Hospital, for example, founded by a Scottish missionary on the eastern slopes of Mount Kenya in 1922 and now run by the Presbyterian Church of East Africa, has dramatically reduced the fertility rate among the 300,000 people in its region. A survey of the region conducted by the U.S. Centers for Disease Control in 1985 showed that 43 percent of its married women use some form of contraception. Even more significant, women in the Chogoria area have a total fertility rate of 5.2 lifetime live births compared to 7.7 for Kenya as a whole (recorded by the 1984 Kenya Contraceptive Prevalence Survey).

Nancy Yinger

Children of families served by clinic funded by British American Tobacco Co. (BAT).

The key to Chogoria's successful community-based family planning program has been the harnessing of the people's tradition of *harambee*, or self-help. The area is blanketed by a grassroots cadre composed of 40 volunteer village health committees, 32 paid nurses, 35 paid field educators, 500 volunteer family health workers, and 250 trained traditional birth attendants. Constant feedback up and down the personnel ladder ensures that the program remains responsive and flexible.

Because of its closely woven network, Chogoria is not a model which can be easily copied throughout the whole country. However, 40 percent of health care services in Kenya are provided by church-run hospitals; Chogoria may be a model for them. And the hospital system makes a basic point: Family planning programs can be effective in Kenya if thoughtfully designed.

The Family Planning Private Sector Project (FPPS), funded by the U.S. Agency for International Development and implemented by John Snow Inc., began operations in 1984 with a mandate to help Kenya's private sector include family planning services in the health services already provided to workers and their dependents. Originally funded through September 1987 with a goal of 30 subprojects and 30,000 family planning acceptors, the project has been extended for two more years, at the personal request of the Vice President. The original targets have already been met; the new goals are for a total of 50 subprojects and 50,000 acceptors.

FPPS's strategy is first to convince a company, plantation, para-state organization, private clinic, or school that its social and economic interests would be served by adopting a strong family planning program. Then, health clinic staff are trained and programs designed to carry out the individual projects. Finally, the workers are educated on the economic and health benefits of smaller families, and provided with appropriate information, contraceptives and follow-up services. FPPS supports individual projects for two years and then leaves it to the companies to run and finance their own programs on a permanent basis.

Why does this approach work? Kenya does have one of the largest and most socially responsible nongovernmental sectors in Africa. Many of FPPS's most successful subprojects have been with companies which provide workers and their families with housing, schools, and health services. If the workers have smaller families, the need for social services will expand at a slower

Continued on page 9

Closet Marriages... in California

In 1986, approximately 225,000 marriages were performed in California. One-third of these were "confidential marriages."

Section 4213 of the California Civil Code allows unmarried couples who have been living together for any amount of time (there is no duration requirement) to get legally married without obtaining a marriage license or health certificate.

This unusual wrinkle in marital law was first authorized by statute in 1877-1878; the law provided that unmarried persons living together as husband and wife could be officially married by a clergyman without a marriage license. A record of the marriage was then filed among the clergyman's church records.

The intent of the statute was to make the children of such relationships legitimate. In the past, children born to unmarried women were not entitled to a portion of their father's estate.

Today this discreet method of marrying has metamorphosed into a way of saving a couple money; confidential marriages do not require a $25-$40 blood test. The "chaplain" at these modern-day nuptials is a notary public, who can buy blank marriage licenses so that the couple does not have to appear before the county clerk. Records of these marriages are deposited with the county government, which keeps them under seal.

Because there is no waiting period, the confidential marriage process makes spur-of-the-moment decisions possible. It also helps the state, by siphoning off some business that would otherwise go to neighboring Nevada.

Since 1972, when statute changes in California law required periodic reporting of health information to the California State Department of Health Services, confidential marriages have increased steeply; this year some 85,000 are expected, according to David Mitchell, chief of the state's Vital Statistics Branch in Sacramento.

– A.v.C.

SURVEY REPORT

Liberia

Located along the Western coast of Africa, Liberia has a relatively small population of 2.3 million and low population density, but heavy migration into a few urban areas from the rest of the country is taxing social and health services in those areas. Liberia's agricultural land, which provides employment for 72 percent of the labor force and produces about 15 percent of the exports, is deteriorating from poor farming techniques, prompting many to move to the city. Mining of iron ore, diamonds, and other minerals accounts for most of the country's exports, but employs only 5 percent of the labor force.

The Liberian Demographic and Health Survey (LDHS), part of the DHS project administered by Westinghouse's Institute for Resource Development, queried 5,200 women aged 15 to 49 about childbearing, health, and family planning practices from March to July 1986.

Preliminary results from the 1986 LDHS indicate that the average Liberian woman has about 6.6 lifetime births, and found no evidence of recent decline in the birth rate. Women age 45 to 49, near the end of their childbearing years, reported having an average of 6.8 children, but only 4.7 of those were still living, indicating a high level of mortality. In 1987, an estimated 127 of every 1,000 newborn infants dies in the first year. Average life expectancy is about 50 years.

Only 6.5 percent of the women in union were using a family planning method at the time of the survey. Fifty-two percent of these women were using the pill, 17 percent were sterilized, and 32 percent used another modern method like the IUD or injectibles. Surprisingly, women who were not married or in a stable union were more likely to be using a contraceptive, other than sterilization, than in-union women. Of all women surveyed, 8.4 percent were using family planning in 1986.

Highest use rates were recorded among women with some formal education: 25 percent of the women in union with a primary or higher education were using a family planning method. But this is a small minority; among the survey sample, 64 percent of the women in union had received no formal schooling.

The majority of women in union wanted another child, but about 33 percent preferred delaying their next pregnancy for at least two years. About 17 percent said they did not want any more children. These two groups – women wanting to delay or to prevent a pregnancy – can be considered potential candidates for family planning use according to the report, indicating a substantial unmet need for family planning services. Many women cited fear of side effects and lack of availability or knowledge of methods as reasons why they did not use contraceptives. One-third said they were not using a method because they were still breastfeeding their last baby.

A majority of children under age 5 had been ill with fever, diarrhea, or respiratory or other disease in the month preceding the survey. The types of treatment mothers administered for diarrhea varied from antibiotics and country medicine to nothing; less than 10 percent had received oral rehydration salts. Almost three-fourths of the children suffering from fever had been given antimalarial drugs in the previous month, reflecting the high incidence of malaria among the population.

– M.K.

DEMOGRAPHER'S PAGE

U.S. Abortions Up? Down?

by Carl Haub and Mary Kent

New figures just published by the Centers for Disease Control (CDC) in Atlanta show that the number of abortions performed in the United States declined between 1982 and 1983, the first decline registered since record keeping began in 1969. Media reports of this decrease resulted in the public impression that some sort of significant downturn had occurred. However, the Alan Guttmacher Institute (AGI), the other primary source of abortion data, showed a slight increase in those two years, an increase which has continued through 1985, the most recent year for which AGI has compiled data.

Is the number of abortions decreasing, increasing, or remaining stable? What does it mean in relation to the annual number of births or pregnancies in the U.S.? To answer these questions, we must examine the primary sources of data and the measures used to analyze them.

Sources of Data

There are three major sources of data on the number of abortions and the women who have them in the U.S., but only two of these report national level figures. One of these is from CDC, which has been collecting abortion data since 1969 as part of an attempt to track abortion-related maternal deaths. Partially because of the work of CDC, the annual number of abortion-related maternal deaths fell from 90 to 14 between 1972 and 1983. Only one of the deaths recorded in 1983 was attributed to an illegal abortion, compared to 39 deaths resulting from illegal abortions in 1972.

The CDC receives official reports of the number of abortions and characteristics of the women who had them from state health departments or from hospitals in accordance with state law. The CDC counts reflect the completeness and accuracy of each state reporting agency. In 1969, when abortion was illegal or restricted in many states, only 10 states reported to CDC, but all 50 states and the District of Columbia have submitted annual reports since 1973.

These official tallies miss illegal abortions, and some abortions are purposely misclassified as another medical procedure to protect a woman's confidentiality. But, according to CDC's Tedd Ellerbrock, CDC's figures can indicate the trends in abortions and the general levels, even if they cannot record every procedure.

The Alan Guttmacher Institute (AGI), a private research organization, is the other major source of national abortion data. It collects data by attempting to survey every hospital, medical clinic, or physician's office which might provide abortions. AGI researchers use telephone directories, newspaper articles, and contacts with local family planning agencies to locate potential abortion providers. Several attempts are made to ensure completion of each AGI questionnaire.

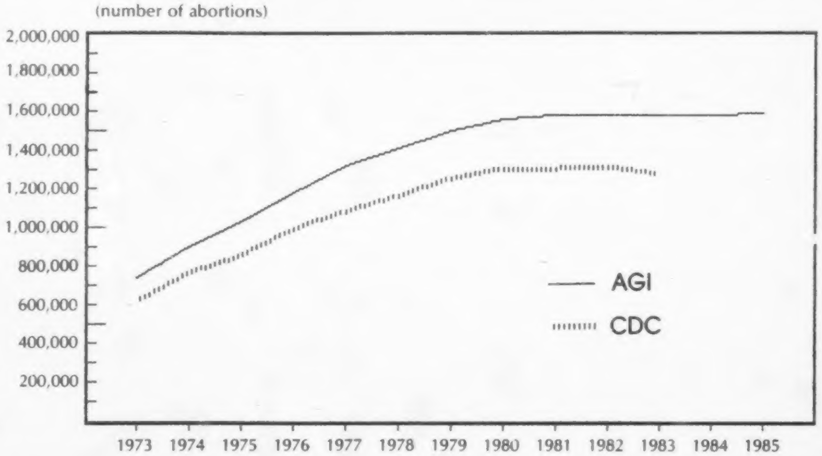
AGI has carried out nine such national surveys, and its estimates are acknowledged to be the most complete available for the United States. The estimates include the number and geographic location of abortion providers, but they lack data on the characteristics of the women who obtain the abortions.

The National Center for Health Statistics has also published abortion data since 1978; however, the data cover, at most, only 13 states. For most states, figures are identical to the CDC reports, and they suffer from the same limitations as CDC data, but they do include detailed characteristics of the women.

The number of abortions estimated by the two main data sources is portrayed in the figure below, showing that while the AGI numbers are much higher, both CDC and AGI appear to be capturing a similar trend. The number of abortions sharply increased between 1973 and 1980, but have leveled off since then. The more complete AGI numbers suggest that about 1.6 million abortions have been performed annually in the U.S. since 1980.

Researchers feel that reporting of abortions may have been less complete in recent years because the widely publi-

Number of Abortions, U.S., 1973–1985 (as reported by AGI and CDC)



CDC = Centers for Disease Control data.
AGI = Alan Guttmacher Institute data.

Carl Haub and Mary Kent are
Demographers at PRB

cized political opposition and even violence against abortion clinics and their physicians makes these providers less willing to respond to a survey or file reports. This reluctance to report could be responsible for some of the leveling off of abortion estimates, and for the divergence in CDC and AGI figures after 1982. By 1985, the number of abortion providers identified by AGI had also dropped by 228 from a peak of 2,908 in 1982.

Abortion Rates and Ratios, United States, 1973-1985

	Abortion Rate (per 1,000 women 15-44)		Abortion Ratio (per 1,000 births)			Abortions (per 1,000 known pregnancies)
	AGI	CDC	AGI	CDC	NCHS*	AGI
1973	16	14	239	196	–	
1974	19	17	282	242	–	220
1975	22	18	331	272	–	249
1976	24	21	361	312	–	265
1977	26	22	400	325	–	286
1978	28	23	413	347	–	292
1979	29	24	420	358	391	296
1980	29	25	428	359	388	300
1981	29	24	430	358	391	301
1982	29	24	428	354	374	300
1983	29	23	433	349	361	304
1984	28	–	430[a]	–	364	297
1985	28	–	428[a]	–	–	298

*13 reporting areas.

[a] Calculated by Population Reference Bureau based on reported AGI abortions

Note: AGI = Alan Guttmacher Institute (Henshaw et al., Tietze and Henshaw).
CDC = Centers for Disease Control (Ellerbrock et al.).

The Measures

How do the number of abortions relate to the annual births and pregnancies? The **abortion ratio** (or the number of abortions per 1,000 births) and the **abortion rate** (the number of abortions per 1,000 women ages 15-44) are the two measures commonly used to relate abortions to overall fertility in a population. A third measure, an **abortion/pregnancy ratio,** published by AGI, attempts to measure the proportion of pregnancies ending in abortion by dividing the number of abortions by the number of live births plus abortions. These measures increased rapidly between 1973 and 1977, then leveled off and appear to have declined since 1983, as shown in the table, meaning that a smaller proportion of pregnancies are ending in abortion.

The abortion rates and ratios may be leveling off because women are better able to prevent unwanted pregnancies than in the past. Other explanations include a greater tendency to carry unwanted pregnancies to term (consider the fact that the birth rate for unmarried women has increased in recent years), or a decline in the availability of abortion due to economic or political pressures.

The characteristics of the women obtaining abortions have shifted over the past decade. Compared to 1973, the women who obtained legal abortions in 1983 were more likely to be unmarried, black, and over age 20 than in 1973. Also, compared to 1973, women were more likely to seek abortions earlier in their pregnancy – over three-fourths were performed in the first 10 weeks – and use them to prevent a first birth rather than a higher order birth. Of the women who obtained an abortion in 1983,

- 68 percent of the women were white, 32 percent non-white
- 79 percent were single, divorced or widowed
- 27 percent were under age 20; 35 percent, 20 to 24; and 38 percent, 25 or older
- 57 percent had never had a child, 21 percent had one child
- 50 percent had the abortion in the first 8 weeks of pregnancy

Are abortions declining in the U.S.? The measures of the two groups which survey abortion trends disagree, but they both show that the rapid increase in abortions experienced during the 1970s has leveled off, and that the ratios of abortions to births and to pregnancies have declined.

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Decision Demographics Opens for Business

Decision Demographics, a new consulting service for business, has just been launched by PRB.

The new venture constitutes "a concerted effort by PRB to serve the business community – in fact, the first effort by any major demographic establishment to reach out to business," according to general manager Stephen J. Tordella. With assistance from PRB demographers, Decision Demographics will "provide demographic analysis to fit the client's exact needs."

Clients will receive customized data and interpretation rather than computer-generated, generic information, according to Tordella. And "backed by PRB professionals, Decision Demographics can make better business projections than anyone else in the business."

Besides custom estimates and projections, Decision Demographics' services include conducting comprehensive "inventories" of demographic and other data resources for a business. Based on the inventory, Decision Demographics will help clients compile and interpret information most relevant to their products or services.

Market potential profiles is another Decision Demographics service. Here, implications of demographic, social, and economic trends for a particular industry will be explored for purposes of strategic planning by an individual business as well as industry associations. These reports will take the form of sections in annual reports, special association studies, and presentation and training sessions.

Another focus for the new firm is organizational demographics. Large companies' employees and dependents form a group whose characteristics can have major financial implications for health care and other fringe benefits. Another "organizational demographics" analysis problem concerns the labor pool available. (McDonalds now complements their traditional teen labor force with retirees.)

Tordella has served as demography center director and technical services director at CACI, a Washington, D.C.-based consulting firm. Prior to CACI, he spent 10 years as a consultant with the Applied Population Laboratory at the University of Wisconsin-Madison.

A wholly owned subsidiary of PRB, Decision Demographics supplants and expands PRB's previous analysis service, DISC, Inc., in offering specialized demographic consulting services beyond those available to the public from PRB's regular information resource center.

Decision Demographics joins the ranks of many firms in the commercial population data industry – one which generates $40 to $50 million annually and serves thousands of clients. The major players in that industry, however, are more data-product oriented than analytic. To make data truly useful, it is necessary to present the specific information the client needs and to interpret the data. "That's where Decision Demographics fits in, our niche," says Tordella, "and we have the demographers to do it."

For further information about Decision Demographics, contact:

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Hispanic Update

Newly revised estimates of the U.S. Hispanic population from the Census Bureau, based on the Current Population Survey (CPS), indicate faster growth in that population than previously suggested. The Bureau estimates that the Hispanic population grew from 14.6 million at the 1980 Census to 18.8 million by March 1987, an eye-catching 30 percent. This rate of growth was five times that of non-Hispanics.

The new estimates incorporate an allowance for estimated illegal immigration since 1980. This provision has the effect of adding 141,000 persons to the Hispanic population each year. This increase, however, is partially offset by a larger estimate of annual emigration, −31,000 for Hispanics, which is now being used. The net effect is to add 110,000 more Hispanics per year, a figure which accounts for 18 percent of the nation's population growth since 1980.

The CPS also showed that about 1 in 4 Hispanic families were below the poverty level in 1986 and that, overall, their median income was about one-third below that of non-Hispanic families, $19,995 vs. $30,231. These income estimates represented about a 10 percent increase in the income for non-Hispanics since 1981, but no increase for Hispanics.

The estimates for the number of Cubans and Puerto Ricans within the U.S. Hispanic population give cause for concern in that both of these populations have shown a decrease since 1985 in the CPS estimates. Such decreases would certainly be unexpected. The Cuban population's decline from 1,036,000 in 1985 to 1,017,000 in 1987 could be attributed to normal sampling error, but the anomaly in the Puerto Rican population was too large for that explanation. Puerto Ricans, estimated at 2,562,000 in 1985, were put at 2,284,000 in 1987. The Bureau will be conducting research into the possible causes of the decrease, particularly into nonsampling errors such as response variability or definitional difficulties.

– C.H.

Kenya

Continued from page 4

rate – a saving for the companies. Also, for companies that hire a high proportion of women, fewer babies mean fewer missed days of work for maternity leave. So a profit motive can be added to the companies' social responsibility.

FPPS has also made creative use of local artists and folk media to capture the interest of potential family planning clients. Some of East Africa's best artists have been commissioned to prepare posters on population and development issues, and family planning/health songs, dances, poems, and drama, in traditional local styles, have been developed and performed by local troupes.

Nancy Yinger

Nairobi's new generation.

Kenya is not on the threshold of achieving a one- or even a two-child family. However, the government is beginning to display a deeper commitment to slowing its rate of population growth. Further, projects like Chogoria and FPPS show that many Kenyans do recognize the health and economic benefits of smaller families and will adopt family planning if the services are offered in appropriate ways.

– Nancy Yinger & Win Carty

SOFTWHERE

POPLAC, a nonprofit professional association of microcomputer users interested in population activities, is expanding its focus from the Western Hemisphere and the Caribbean regions to worldwide. Since its inception two years ago, POPLAC has outgrown its original mandate to provide software and hardware information to organizations working with and in Latin America and the Caribbean. After September 1988 POPLAC will become self-supporting. To achieve this goal it is seeking the involvement of all interested persons and organizations. At this time the group has more than 500 paying members from a wide and diverse group of organizations dealing with population issues. The new worldwide recruitment drive is also aimed at individuals outside the population community who use microcomputers.

POPLAC's membership fees are as follows: Organizations or individuals in Latin America, Asia, Near East, or Africa (except Japan, Hong Kong, Singapore, or Israel): $15.00. For other countries both individual and organization memberships are $25.00. To request an application form and a sample newsletter write: POPLAC, c/o Social Development Center, 1313 East 60th Street, Chicago, Ill. 60637.

– D.L.

POPULATION UPDATE

Estimated United States Population:

As of June 1, 1987	243,571,000
As of June 1, 1986	241,403,000

The above estimates include armed forces overseas and are from U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 1007.

Estimated World Population:

As of November 1987	5,062,000,000
Annual growth	87,000,000

Estimated by extrapolation from the mid-1987 population on PRB's *World Population Data Sheet.*

Latest Provisional Statistics for the U.S.: June 1987

	12 months ending with June					
	Number		Rate			
Item	1987	1986	1987	1986	1985	1984
Live births	3,767,000	3,744,000	15.5	15.6	15.8	15.5
Deaths	2,103,000	2,092,000	8.7	8.7	8.8	8.6
Natural increase	1,664,000	1,652,000	6.8	6.9	7.0	6.9
Marriages	2,438,000	2,404,000	10.1	10.0	10.3	10.4
Divorces	1,166,000	1,180,000	4.8	4.9	4.9	4.9
Infant deaths	38,100	39,300	10.1	10.5	10.6	10.8
Population base (in millions)	...	...	242.4	239.9	237.3	234.9

Note. Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source. Monthly Vital Statistics Report (Vol. 36, No. 6) from the National Center for Health Statistics.

TAKE A NUMBER

Report on Centenarians: A recent Census Bureau report put the number of U.S. centenarians in 1986 at 25,000, up from about 15,000 in 1980. (The latter is based upon Social Security records; analysis of the 1980 Census count of 32,000 showed a good deal of age overstatement and respondent errors.)

By 2000, this oldest of age groups will number about 100,000 and by 2080 their numbers should be approaching the 2 million mark. The odds of surviving to age 100 in 1879 were 400 to 1, but in 1980 the odds of a newborn reaching the century mark improved to a surprising 87 to 1, a result, of course, of rising life expectancy. Beyond age 100, further longevity is less likely with the 105+ age group only 10 percent the size of the 100+ population.

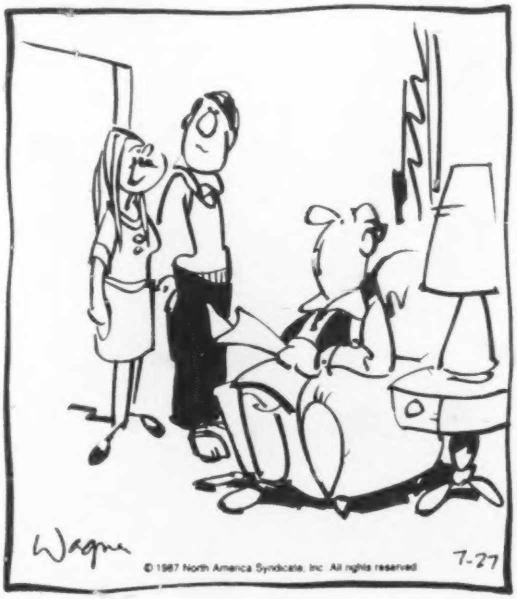
Family Planning Increase in Indonesia: The Department of Demography of the Australian National University reports that data from Indonesia's 1985 Intercensal Survey (SUPAS 1985) show a marked increase in family planning (a decrease in fertility had been reported in last month's *PT*). SUPAS 1985 estimates that contraceptive prevalence rose to 40 percent for women 15-44 in 1985 from 27 percent in 1980. The Indonesian rate may, however, be higher based upon national family planning program statistics (BKKBN), which suggest that 55 percent of Indonesian women 15-44 were using some form of family planning. These data may, in fact, yield a more reliable estimate; research indicates that the BKKBN rate may be in closer agreement with the reported SUPAS total fertility rate of 3.2 children per woman. A more complete report on fertility developments in this large Southeast Asian country will appear in *PT* when the full survey volume has been received.

The Driver's License Address Change Composite Migration Estimating Method?: How's that? Yes, for California, the DLACCMEM is one of the methods the Census Bureau uses in its painstaking estimate series for all 3,138 U.S. counties and county equivalents. The 1986 edition of this valuable and widely-used series has recently been issued by the Bureau and contains some interesting observations. For one, Los Angeles County alone grew by over 800,000 from 1980 to 1986 and the state of California added 3.3 million people – a group the size of the population of Colorado. It may come as a surprise to some that none of New York City's counties declined in population. Even the Bronx added 25,000 people for a 2.1 percent increase. Richmond County (Staten Island) grew the fastest with an increase of 6.4 percent, or 23,000 people. At the same time, Westchester County, one of the city's major suburban areas, actually lost population, but only barely. Still, this seems to run counter to what one expects. County statistics fans will want to know that two new counties have been added since 1980, La Paz in Arizona and Cibola in New Mexico. And, Alaska has established the Northwest Arctic borough, which, however, is generally the same territory as the former Kobuk Census Area.

– C.H.

ADDENDA

GRIN & BEAR IT **By Wagner**


Wagner
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7-27

"This is the man I want to be the father of my children, Daddy . . . as soon as I find someone to have them for me."

CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in Current Readings. Publishers may address review copies to Book Review Editor, POPULATION TODAY, Population Reference Bureau, 777 14th St., N.W., Washington, D.C. 20005.

THE ECONOMICS OF MASS MIGRATION IN THE TWENTIETH CENTURY, edited by Sidney Klein. New York: Paragon House Publishers, 1987. 179 pages. $10.95 paper. ISBN 088702-213-8.

This book of five essays examines economic aspects of migration covering India, South Korea, Latin America, Australia, and New Zealand. The book points out that:

European migration to Latin America after World War II was extensive. Norman Plotkin observes that a total of about 5 million migrants came to South America to escape from war-torn economies of Europe; the majority of these immigrants came from Southern Europe. This movement slowed as Europe's economic recovery took hold.

Remittances from emigrants can contribute significantly to their original country's balance of payments. This has been the case in India, whose emigrants to developed countries since World War II consisted mostly of professionals. Remittances to Korea from Koreans working overseas were speculated to have amounted to $500 million by 1983, used mostly for land and housing improvements. (The increasing number of Korean emigrant entrepreneurs is expected to have an impact on the American enterprise scene in the future.)

Australia is able to control immigration tightly by virtue of its isolation. Economics from the Australian point of view has played a subordinate role in recent times compared to other admission criteria (such as "... race, national origin, family unification, defense, ecological population pressures ..." as John F. Walker notes in his chapter.)

Edwin P. Reubens, in his overview on the cost/benefit of migration, says that on balance international migration is a positive-sum transaction for almost all parties. He suggests that migration be subject to multilateral agreements. And the authors stress that the surplus labor population reduction in the less developed countries is insignificantly affected in terms of overall available surplus labor.

—Alexander von Cube

DEATH, SEX, AND FERTILITY: Population Regulation in Preindustrial and Developing Societies, by Marvin Harris and Eric B. Ross. New York: Columbia University Press, 1987. 227 pages. $25.00. ISBN 0-231-06270-2.

Populations grow as a consequence of an excess of births over deaths (ignoring migration). Since prolonging life is considered to be a universal desire, control of fertility through the use of contraception is the focus of most discussion of social intervention in population growth.

In *Death, Sex, and Fertility*, anthropologists Harris and Ross argue that societies have long had mechanisms for control of population growth through mortality, and that demographers have for various reasons ignored this fact. In this ambitious study of human societies from the paleolithic period through the rise of the modern state to contemporary developing countries, they find ample evidence that many societies have effectively managed their population growth and that abortion and female infanticide have been among the primary methods. The quirks of the European demographic transition could be better understood with this in mind, the authors contend.

They review some of the evidence that biological factors affect fertility: for example, that malnutrition can depress fecundity, that prolonged breastfeeding extends the postpartum sterility of new mothers, and that physical stress can increase rates of spontaneous abortion. They also cite anti- or pronatalist laws and social conventions which directly or indirectly affect birth rates. For example, it may not be coincidence that 4th century Greeks, who wanted to slow population growth, tolerated, even fostered, homosexuality while the Romans, desiring a larger population to man the armies, condemned it. However, many of the fascinating case studies reported here focus on social control of which, or how many, children are allowed to survive to adulthood. Since female babies determine future population growth, Harris and Ross argue, they have consciously or unconsciously been subjected to abuse and neglect in order to encourage female mortality.

Current population policies affecting aid to developing countries, in denying access to abortions, have ignored the historical precedents of infanticide and pedocide. This moralistic shortsightedness will prolong the practice of "preferential mortality," a greater evil than abortion, say Harris and Ross. After pointing out many shortcomings of demographic theory, they conclude by agreeing with the general view that fertility control is the most humane and effective means to slow population growth.

—Mary Kent

SPOTLIGHT

COTE D'IVOIRE

Population (1986 est.): 10.8 million
Land area: 124,500 sq. miles
Births per 1,000 pop. (1986 est.): 46
Deaths per 1,000 pop. (1986 est.): 15
Rate of natural increase (1986 est.): 3.0 percent
Total fertility rate (1986 est.): 6.7
Infant mortality rate (1986 est.): 105 (infant deaths per 1,000 live births)
Life expectancy at birth (1986 est.): 52 years
GNP per capita (1986 est.): $620
Capital: Yamoussoukro

by Wendy Patriquin

The Republic of Côte d'Ivoire (formerly the Ivory Coast) lies on the south side of the West African bulge. French is the official language, but a large number of indigenous languages are also spoken.

Most Ivorians follow traditional beliefs, while about one-quarter are Muslim and 12 percent are Christian (mostly Roman Catholic). Although Yamoussoukro – the birthplace of the President – is the official capital, Abidjan (population: 1.7 million) remains the seat of government.

It is estimated that there are 2 million non-Ivorian Africans currently living in the country, mostly from the neighboring countries of Guinea, Mali, Burkina Faso, Nigeria, and Mauritania. There is also a large non-African expatriate community of about 35,000 French and 100,000 Lebanese.

Formerly a province of the Federation of French West Africa, the country achieved self-rule in 1958, and became fully independent in 1960 under President Felix Houphouet-Boigny, who was reelected to his sixth five-year term in October 1985. His continued leadership along with a high rate of economic growth and strong support from France have contributed to the stability of the regime.

Côte d'Ivoire since independence has been one of the most prosperous countries in Africa, with nearly 7 percent annual growth between 1960 and 1980. The largely agricultural economy employs about three-quarters of the labor force. The southern fertile region has proved to be excellent for growing the three major export items: coffee, cocoa, and timber.

Côte d'Ivoire is the largest producer of cocoa in the world, and the third largest producer of coffee (after Brazil and Colombia). The export of these three commodities accounts for about 75 percent of total export earnings, but crop diversification has been encouraged to lessen dependency on them. The country is also one of the world's largest producers of palm oil, and the government is striving to achieve self-sufficiency in rice by the end of 1987. Recent discoveries of oil are also helping to diversify the economy.

The government considers its anticipated population size satisfactory, and wishes to increase the rate of population growth through higher fertility by providing social welfare services, including child allowances and maternity benefits. It also desires to reduce the substantial flow of immigrants, and there is particular concern about the number of undocumented, illegal migrants and refugees in the country.

The population is characterized by a high growth rate – the latter has risen from 3.64 percent per annum over the period 1965-1975 to 4.3 percent since 1975; 1.3 percent of this is due to immigration. At this rate, and even without allowing for immigration, the population of Côte d'Ivoire will have doubled in 20 years. Immigration, for its part, has risen from 75,000 a year during the decade 1965-1975 to a current figure of 94,000. This factor considerably increases the overall rate of population growth. Furthermore, if current trends persist, the proportion of aliens in the resident population will increase from 25 percent in 1980 to over 30 percent by 1990.

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POPULATION TODAY

Vol. 15, No. 12 December 1987

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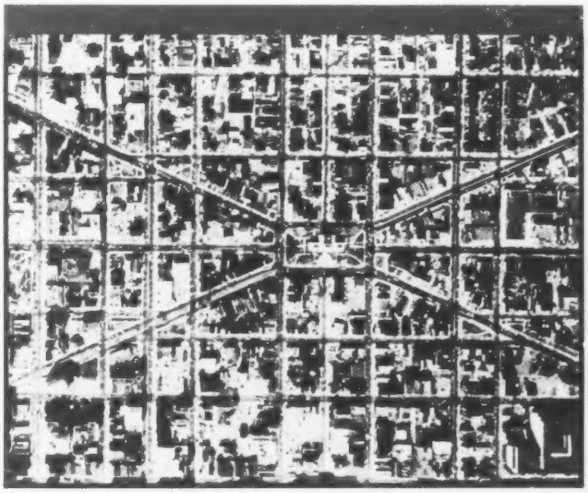

Dept. of Housing and Urban Development

76 percent of the U.S. population live in metro areas. (See page 4.)

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FROM THE EDITOR'S DESK

Call it Populandia. Call it 10 years old.

As the Holiday Season commences, the world's most famous mythical mini-continent is completing its first decade of population growth.

In August 1978, amid spectacular volcanic convulsions, a new Pacific island erupted from the ocean floor. Starting Jan. 1, 1978, this 160,000 sq. mile patch of *nouveau* real estate became the country of destination for all earth's natural increase (the "surplus" of births over deaths; i.e., 64 percent of all births).

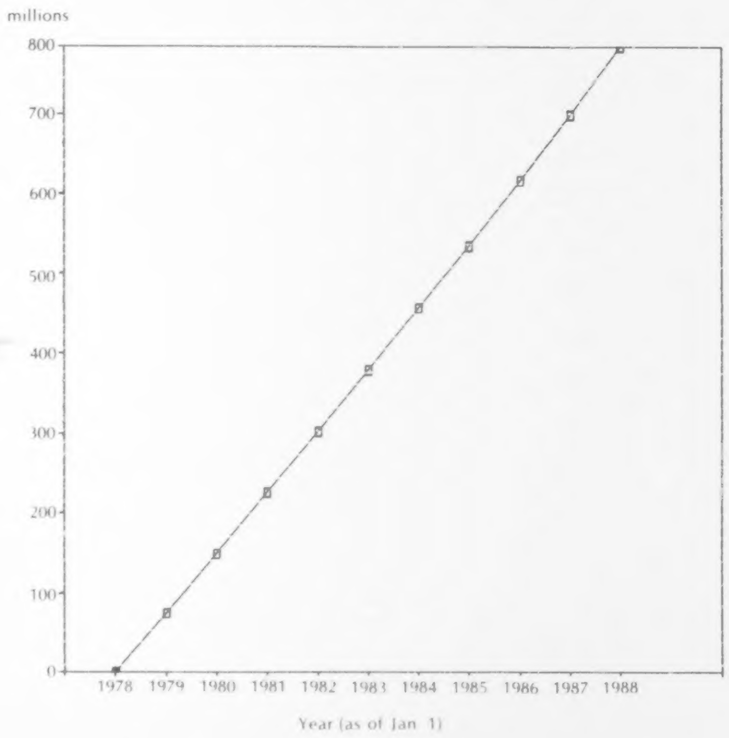
The rest, as they say, is history – a history doggedly related in past issues of *PT* (see December 1986 issue). A veritable battalion of babies descended on Populandia: initially 200,677 per day in 1978, but increasing year by year until, during every day this past year, another 234,088 tots have arrived from all the world's countries to boost the island's youthful totals.

Today 789,686,740 Populandians are alive and thriving. The island nation that began with the arrival of a single child now contains one out of every seven earthlings. For Populandia, only one national motto will do: Excelsior!

– Art Haupt

SPEAKING GRAPHICALLY

10 Years of Populandia: Out of Sight



POPULATION
TODAY

VOL. 15, NO. 12 **December 1987**

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*Educators and students should send supporting documentation.

No Adjustment for the 1990 Census

The 1990 Census will not be adjusted to compensate for any calculated undercount.

That decision, long awaited, culminates months of debate on how to resolve the undercount problem, considering the ever-increasing use of census figures in entitlement and other programs, as well as its constitutionally mandated purpose as the basis for the decennial apportionment of Congressional seats.

The 1980 Census, considered the most accurate ever, is calculated to have undercounted the U.S. population – by a factor of 1.0 to 2.2 percent, according to Bureau studies. No adjustment was made for this undercount; like baseball, census enumeration is not overruled by instant-replay analysis.

The magnitude of undercount is largely affected by minority populations. Because of the unequal distribution of these populations, the accuracy of the census would likely vary from place to place. A number of mayors and members of Congress, fearful of their jurisdictions being shortchanged, have urged that census results be subject to later "correction."

But in Washington, Oct. 30, the Commerce Dept. announced that decennial census figures would not be revised. (The Bureau's parent entity, not the Bureau itself, made the announcement, which was considered unusual.)

"Adjustment," Commerce Under Secretary Robert Ortner announced, "creates more problems than it solves." He argued that any post hoc modification of results was "unlikely to improve on the 99 percent or better [census] count which we expect to achieve"; and that "no matter how careful and unbiased the adjustment process is, it will raise suspicions in the public mind about the reliability and integrity of the census and of the Federal statistical system."

> "No matter how careful," adjustment would "raise suspicions in the public mind"
> —Under Secretary Robert Ortner

Moreover, Ortner warned, "Adjusting the count may create the appearance of changing the numbers to achieve a desired political outcome by the party in office."

Prior to the decision, the Bureau had indicated that it was prepared to make adjustments after the April 1, 1990, census had been conducted and the "final" census count issued. The procedure would have been to conduct a huge, 300,000-household survey on June 1, 1990, and cross-check the discrepancies between that survey and the census to isolate the inaccuracies in each. On the basis of the survey, the decennial census results would have ultimately been changed.

Because the decennial census is used to apportion Congress, the count has important political consequences. And before the decision was announced, specialists had been doubtful (as Ortner acknowledged) as to whether it would be possible to choose a single, widely accepted undercount adjustment method that would be litigation proof (for there undoubtedly could not be high-, medium-, and low-variant Congresses).

– A.H.

Black Fertility Trends in the 1980s

In the 1980s, the U.S. black population has continued to increase, but the growth patterns of this major group are changing.

In the 1970s, American blacks increased as a proportion of the U.S. population, from 11.1 percent in 1970 to 11.8 percent in 1980. For 1986, the Census Bureau estimates a black population of 29.4 million, 12.2 percent of the total population.

The black population has continued to grow faster (an average of 1.5 percent annually, 1980-1985) than the white population (0.8 percent). Nevertheless, the proportional increase of this population has grown only slowly during the 1980s, as its fertility rates continued to fall (the total fertility rate declined from 2.30 total children per woman in 1980 to 2.15 in 1984), coming closer to convergence with whites (whose own TFR inched downward from 1.75 to 1.72 during the same period).

At the same time, the proportion of the nonwhite population that is black is edging downward. William O'Hare, PRB's Director of Policy Analysis, points out that in 1960, blacks made up 69.1 percent of the minority population, but by 1985, that figure had fallen to 55.1 percent.

The median age of the black population has been consistently about six years younger than that of whites, reflecting the higher fertility and lower life expectancy of blacks compared to whites. Both populations have aged since the crest of the baby boom, with blacks' median age rising from 24.9 years in 1980 to 26.3 years in 1984.

With the aging of the baby boom have come age-structure changes; the black school-age population (ages 5-17) has actually declined by 1.6 percent between 1970 and 1986. Meanwhile, there is a resurgence in the under-5 group, which has grown by 10.7 percent from 1980-1986. This was due to the baby-boom "echo" (as baby boomers swell the proportion of the population of reproductive age and have their own babies).

– A.H.

Metro U.S.A. Data Sheet

Some 76 percent of the U.S. population lives in the nation's 281 metropolitan areas (designated CMSAs or MSAs).

What 281 areas where? PRB's newest wall chart has the answers. The *Metro U.S.A.* Data Sheet lists all the U.S. metro areas, from Number 281, Enid, Okla. (62,900 population, as of 1986) all the way up to Number One, the New York metro area (17,967,800 population).

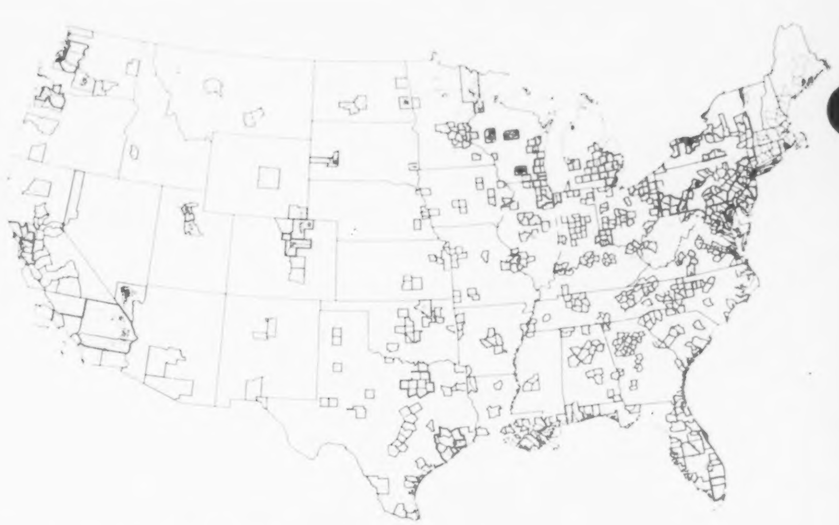
During the 1980-1986 period, U.S. metro areas grew by 4.5 percent, as compared to 3.4 percent for the national population outside MSAs. The most dramatically rapid urban growth occurred in the Sunbelt. Specifically, of the fastest growing 20 metro areas, 9 were in Florida and 6 in Texas. Naples, Fla., mushroomed the most, growing by 41.2 percent to 121,400.

In terms of absolute numbers of increase, the growth of the Los Angeles-Anaheim-Riverside CMSA dwarfed the rest of the country's urban areas (even though it grew by "only" 13.7 percent during the 1980s and has slowed compared to previous boom years). This metro area grew by nearly 1.6 million population; the second largest increase recorded was 725,000 by Dallas-Ft. Worth.

A Metropolitan Statistical Area (MSA) is a county or group of counties that contains either a city of 50,000 or an urbanized area of 50,000 or more and a total population of 100,000 or more.

A Consolidated Metropolitan Statistical Area (CMSA) is a large urban area that contains 1 million or more population (i.e., an MSA) and also includes a Primary Metropolitan Statistical Area (PMSA), a smaller metro subarea.

PRB members receive their copies of the *Metro U.S.A. Data Sheet* in the same mailing as this *Population Today*. Additional copies of the Data Sheet can be ordered from the Population Reference Bureau, Inc., Circulation Dept. P.O. Box 96152, Washington, D.C. 20090-6152, with checks payable to PRB. Prices are $2.00 ea., 2-10, $1.75 ea., 11-50, $1.50 ea., over 50, $1.25 ea. Orders for $50 or less must be prepaid and include $1.00 for postage and handling.



Three out of four Americans reside in metropolitan areas.

The Saga of Projections

Next to censuses, there is probably no more popular demographic product than population projections: Government officials and business people know they cannot plan for the future without having some grasp of the size and character of tomorrow's population.

Whether it's the size of the world population in 2020 (7.992 billion, according to PRB's *World Population Data Sheet*), or the size of Idaho's population in 2035 (1.4 million, the Census Bureau projects), to end users of population data, projections may seem like magic prognostications – the crystal ball where tomorrow can be glimpsed today.

But in this world, there is no such thing as a crystal ball; the future hasn't happened yet. And projections can serve only as models of possible futures rooted in today's data and events, as Carl Haub observes in the latest *Population Bulletin*, "Understanding Population Projections."

Projections come in many forms. Haub shows how projections can be calculated, from the straightforward growth rate method to the cohort-component method, assuming changes or continuations in fertility, mortality, or migration. There is no single absolute method of projection; but although the Census Bureau puts out projections in as many as 30 variants, it's the "medium variant" that gets play as fact.

Further, in the best of circumstances, projections are still only as good as the original data behind them. Even censuses – the mother lode of population data – can vary in their accuracy, and the farther in the past they lie, the more interim surveys and projections must take up the slack. Likewise, the sources for vital data concerning fertility and mortality, on which population statistics depend so much, vary greatly in quantity.

Perhaps, as demographer Leon Bouvier once commented, there is no such thing as an erroneous *projection* (assuming the math has been correctly performed). What are crucial are the suppositions that get plugged into these calculations. Profound misunderstandings about the results could be avoided if calculated future figures were called results of assumptions instead of projections.

Copies of Haub's 44-page *Population Bulletin*, "Understanding Population Projections," can be ordered from PRB, Circulation Dept., P.O. Box 96152, Washington, D.C. 20090-6152, with checks payable to PRB. Prices are $4.00 per single copy; 2-10 copies, $3.00 each; 11-50 copies, $2.50 each; over 50, $2.00 each. Orders for $50 or less must be prepaid and include $1.00 for postage and handling.

Population by Satellite

"I am a firm believer that African families are beginning to realize that it is not just a large family that they want, but a family that is healthy, a family that is educated, and a family that can stand in the sun." So commented Dr. Frederick T. Sai, Population Adviser to the World Bank, during PRB's first-ever international satellite teleconference Oct. 8.

Using space-age technology, PRB's IMPACT project staged a news conference between health experts and government leaders attending an international conference in Nairobi, Kenya, and journalists in Washington.

Panels of journalists interviewed world leaders via satellite, asking questions about health and family planning issues. The interviewees were all in Nairobi attending the "Better Health for Women and Children Through Family Planning" international conference October 5-9.

Besides Dr. Sai, formerly of Ghana's Ministry of Health, the interviewees included Jamaican Minister of Social Security Mavis Gilmour; Pramilla Senanayake of the International Planned Parenthood Federation (IPPF); Miguel Trias, Executive Director of PROFAMILIA in Colombia; and Duff Gillespie, chief of the Office of Population at the U.S. Agency for International Development.

Reporters included columnists Georgie Anne Geyer and Ray Cromley; Scott Simon of National Public Radio; Ian Steele of the Press Foundation of Asia; Barbara Pyle of Turner Broadcasting Systems; Adebisi Olawunmi, News Agency of Nigeria; George Gedda of the Associated Press; Paula Wolfson of the Voice of America; Luis Covarrubias of UPI's Spanish News Network; and Hedayat Abdel Nabi of Egypt's *Al Ahram*. The program host and executive producer was Michael J. Marlow. The broadcast was made possible by the International Telecommunications Satellite Organization's project SHARE, and was produced by Winthrop P. Carty and the staff of IMPACT.

—J.A.

SURVEY REPORT

Ecuador

The preliminary report from Ecuador's 1987 Demographic and Health Survey shows that fertility is continuing to decline, but that more family planning and basic health services are needed. The survey of 4,711 women 15 to 49 years of age was conducted between January and March 1987. The third such survey on family planning issues since 1979, it provides valuable data on trends in fertility and contraceptive use.

About one-half of Ecuador's 10 million inhabitants live along a humid coastal region dominated by the congested port city, Guayaquil. Between 1975 and 1979, the nation's total fertility rate (TFR) was about 5.4 lifetime births per woman, but this fell to an average of 4.3 children – a 19 percent drop – from 1982 to 1987, according to the survey. As further evidence of fertility decline, the average number of children born to women 45 to 49 years of age in 1987 was 6.0, compared to 6.7 for women 45 to 49 in 1979.

About two-thirds of the women in unions said they did not want to have any more children, and one-fifth said they would prefer to wait two or more years before another pregnancy. Generally, women with higher fertility were most likely to say they wanted to avoid another pregnancy: 84 percent of the women with 3 or 4 children did not want any more children, compared to less than one-half of the women with 2 or fewer children.

Compared to the 1982 Contraceptive Prevalence Survey, family planning use by Ecuadoran women increased only slightly by 1987, from 40 percent to 44 percent of the currently in-union women of reproductive age. The pill is slightly less popular than before, possibly because of fear of adverse health effects. Concern for health effects was the major reason women listed for discontinuing contraceptive use.

Female sterilization and the IUD are the most popular family planning methods, chosen respectively by 34 percent of married and 22 percent of in-union women who use contraceptives. The pill, used by 19 percent of respondents, was the third choice. Natural family planning is gaining wider acceptance and was practiced by about 6 percent of the couples in 1987, accounting for 14 percent of all birth control use. The condom and male sterilization, exclusively male methods, are rarely used. Only 18 percent of the women surveyed said they knew vasectomy was a family planning option, and only 47 percent were familiar with condoms.

Contraceptive use was much higher in Ecuador's coastal and urban areas than in its rural and mountainous regions. Still, the most dramatic difference in use was by education. Lack of fluency in Spanish, the official language, is an additional barrier to the knowledge and use of family planning for illiterate women (many of whom speak only Indian languages). Only 19 percent of illiterate women used family planning, less than half the rate for women with at least some primary education, and one-third of the rate for college-educated women.

Nearly 70 percent of women with a child under age 5 had received prenatal care. Nonetheless, about 40 percent of the children had suffered from diarrhea and 56 percent from fever within the two weeks preceding the survey. While incidence of illness was slightly higher in the rural areas where lack of services might be a factor, education of mother was the variable most closely associated with children's illness. Lack of education is associated with higher morbidity because of a variety of factors including poor living standards, limited access to medical services, and poor sanitary health practices.

—M.K.

SDA Meets in Atlanta

The newly named Southern Demographic Association (formerly the Southern Regional Demographic Group) held its annual meeting in Atlanta, Ga., Oct. 14-16. The SDA is a scientific and educational organization comprised of persons with professional interests in demography and population studies.

New officers were elected, including new President-elect Julie Martin (of University of Virginia's Tayloe-Murphy Institute) and new board member William O'Hare of PRB.

At the business meeting the members agreed that the SDA would embark on several efforts to expand membership and raise the Association's profile. A brochure is being prepared describing the organization, whose members are concentrated (though not exclusively) in the South.

The next annual meeting of SDA will be held Oct. 19-21, 1988, in San Antonio, Tex.

Speidel PCC President

J. Joseph Speidel, a longtime leader in public and private population program efforts, has been elected president of the Population Crisis Committee (PCC), a Washington-based nonprofit organization advocating voluntary family planning worldwide.

Dr. Speidel served at the U.S. Agency for International Development for 14 years, directing its population research program, and then served as Deputy Director and Acting Director of the Office of Population before becoming Vice President of PCC in 1983.

He succeeds Dr. Fred Pinkham, who after 10 years as president of PCC is leaving to assume the position of Associate Director of the Institute of Population and Resources at Stanford University. The new Institute will feature interdisciplinary graduate degree programs, research, and faculty and student exchanges with less developed countries in the fields of population, environment, resources and development.

SOFTWHERE

From Great Lakes Software come two impressive new Population Data Base Retrieval Systems; The Social Science Tool Kit: World and The Social Science Tool Kit: States. These programs run on the Apple II+, IIc, or IIe series and are intended for sixth grade through high school students.

The Social Studies Tool Kit introduces students to new dimensions on the information age not available through textbooks. With the charting, graphing, mapping and calculation capabilities, the user can process information in an almost limitless way to explore many analytic questions. The World Tool Kit contains over 80 files of data information on two disks, and users can add their own data. Its file categories include data on Population and Vital Statistics, Climate and Geography, Education, Health Care, Religion, Transportation and Communication, Government, Economics, and Crime. The 151 countries are grouped into 5 regions and 13 subregions. The States Tool Kit contains similar data and categories for the 50 U.S. states.

Each kit sells for $89. Annual updated supplements are planned. For further information, contact: Great Lakes Software, Box 8756, Green Bay, Wis. 54308.

– *D.L.*

POPULATION UPDATE

Estimated United States Population:

As of August 1, 1987	243,979,000
As of August 1, 1986	241,784,000

The above estimates, the latest available, include armed forces overseas and are from U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 1012.

Estimated World Population:

As of December 1987	5,069,000,000
Annual growth	87,000,000

Estimated by extrapolation from the mid-1987 population on PRB's *World Population Data Sheet.*

Latest Provisional Statistics for the U.S.: July 1987

	12 months ending with July					
	Number		Rate			
Item	1987	1986	1987	1986	1985	1984
Live births	3,772,000	3,732,000	15.6	15.5	15.7	15.5
Deaths	2,104,000	2,094,000	8.7	8.7	8.8	8.6
Natural increase	1,668,000	1,638,000	6.9	6.8	6.9	6.9
Marriages	2,433,000	2,406,000	10.0	10.0	10.3	10.4
Divorces	1,163,000	1,173,000	4.8	4.9	4.9	5.0
Infant deaths	37,900	39,400	10.1	10.6	10.6	10.7
Population base (in millions)			242.4	240.1	237.5	235.0

Note. Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source. Monthly Vital Statistics Report (Vol. 36, No. 7) from the National Center for Health Statistics.

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Will the Yuppie Era ever end? [From the Editor's Desk] (Oct p 2)

– Compiled by Tracey Smith

TAKE A NUMBER

The Eyes Have It: What's next, a survey of "couch potato" fertility? Singapore in the last two years has become officially concerned about its low birth rate, after a very successful two-decade family planning program brought fertility down to replacement level. Too much TV is now blamed for too few children. A government-sponsored forum on low fertility has suggested that couples are spending excessive amounts of time before the tube and concluded that "by the time they are through with the programmes, they are too tired to do anything else." That, along with soap operas depicting childless cohabitation and delayed childbearing, are helping keep the birth rate low. The forum did, however, cite other factors, such as many parents' view that they could better provide for fewer children.

From the Census Bureau: San Diego and Dallas have joined the ranks of U.S. cities of 1 million or more population in 1986, bringing to eight the number of demographic millionaires. There are 182 cities with at least 100,000 residents since Scottsdale, Ariz., Plano and Brownsville, Tex., Hayward, Inglewood, and Orange, Calif., and Pueblo, Colo., joined the list and Davenport, Iowa, left it. Florida remains the "oldest" state with a median age of 36.0 years, compared to the national average of 31.7 in 1986, while high-fertility Utah is the youngest, with a median age of 25.5. 64.8 million Americans voted in the 1986 Congressional elections, down 3 million from the 1982 election; only 46 percent exercised their right to vote. Of the younger voters, ages 18-24, blacks had the highest percent voting, 25.1, whites were next with 21.6, and Hispanics had a turnout of 11.6 percent.

Eire Emigrants: *The Economist* reports that an unemployment-driven exodus has caused a major outflow from Ireland once again and that the country's population is decreasing as a result. About 30,000 are expected to leave this year, most of them in their 20s, and a total of 500,000 are expected to leave over the next 25 years. The emigration will probably benefit Ireland, as about 76,000 new jobs must be found in the next decade just to maintain the present unemployment rate of 20 percent.

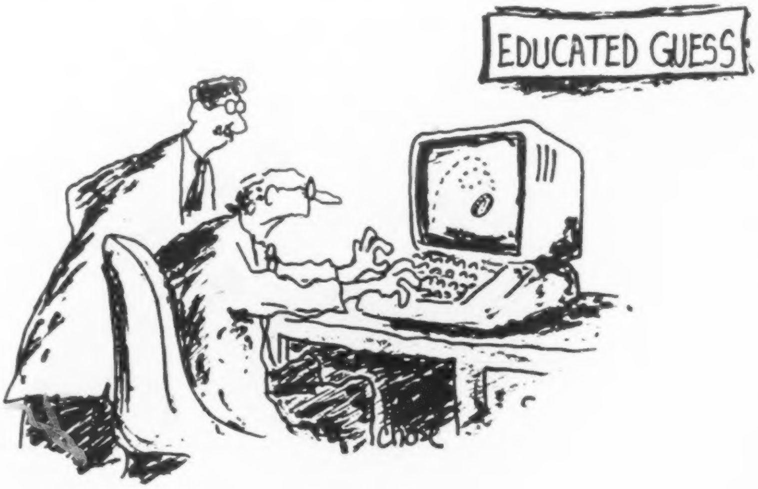
News From ESCAP: The UN's Economic and Social Commission for Asia and the Pacific reports the following: Malaysia has settled upon a new population policy designed to achieve replacement level fertility by the year 2070 and to attain an eventual population size of 70 million (from about 17 million today). Pakistan has set a goal of reducing the crude birth rate to 36 per 1,000 in 1988 (from 40 in 1983), partly to offset expected declines in the crude death rate. Vietnam would like to reduce the population growth rate to below 1.7 percent by 1990, but a serious lack of facilities for family planning is hampering those efforts and Australia sees immigration as a solution to problems caused by its aging population. (Immigrants are usually young persons.)

Many *PT* Readers received a brief survey in the October publications mailing. With the feedback of such questionnaires, PRB aims to keep improving the usefulness and editorial content of its publications.

If you have not already done so, we would appreciate your taking a few moments to complete the survey and return it in the stamped, preaddressed envelope included in that mailing. Thanks!

—*C.H.*

ADDENDA



Science, drawing by John Chase, reprinted by permission

CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in Current Readings. Publishers may address review copies to Book Review Editor, POPULATION TODAY, Population Reference Bureau, 777 14th St., N.W., Washington, D.C. 20005.

A DIRECTORY OF INTERNATIONAL MIGRATION STUDY CENTERS, RESEARCH PROGRAMS, AND LIBRARY RESOURCES, compiled by Diana Zimmerman et al. Staten Island, N.Y.: Center for Migration Studies, 1987. 299 pages. $35.00. ISBN 0-934733-18-X.

The Center for Migration Studies has compiled a worldwide directory of information on migration study centers, research programs, and library resources. Its goals: to help facilitate the exchange of information among groups conducting research; help documentation specialists, reference librarians, researchers, and policymakers identify the sources generating migration-related materials; and gain some measure of bibliographic control over a rapidly expanding field of inquiry.

The directory lists 279 organizations, agencies, committees, research programs, and specialized libraries, plus migration study institutes, information clearinghouses and documentation centers, demographic research institutes publishing frequently on migration and refugee topics, centers for the study of bilingualism; and ethnic and minority study centers including those engaged in studying immigration history, immigration law, and policy.

All entries are accessible through a hierarchical, alphabetic arrangement (continent, country, and center/program). There are two indexes: geography and title. The majority of entries are for North America and Western Europe. The compilers have provided a sample questionnaire so that the directory's users can send in additional entries.

Specialized directories of this scope from the noncommercial sector have previously been nonexistent. Couple the uniqueness of this one with the timeliness of the entries and the high reputation of the Center's publications, and one has a reference work that rightfully should appear at the top of acquisitions lists for institutions and individuals who need ready access to migration and refugee data sources.

– Denise Dowdell

BASIC DATA ON FERTILITY IN THE PROVINCES OF CHINA, 1940-82, by Ansley J. Coale and Chen Sheng Li. Honolulu, Hawaii: Papers of the East-West Population Institute #104, January 1987. 366 pages, $5.00. ISBN 0-86638-088-4.

This book presents the results of computations of age- and marriage duration-specific fertility rates for China's 28 provinces based on the 1-per-1,000 sample conducted under the auspices of the State Family Planning Commission in 1982. Most of the volume consists of the 168 tables presenting rates derived from retrospective fertility data from the survey for each province, and where possible, for rural and urban areas of provinces. Fertility rates are presented for five-year age and duration intervals for as many years in the 1940-1982 period as the data would permit.

A brief introduction describes the methodology of the calculations and provides summary tables and charts highlighting their most prominent features, principally the dip in fertility during the late 1950s corresponding to the Great Leap Forward, the spike in rates during the early 1960s, and the downward trend of the 1970s. Data on the mean age of first marriage for women show a rise from around 18 in the 1940s to 23 in the late 1970s. A useful volume for those interested in China's population.

– Thomas W. Merrick

Books Received

THE ECOLOGY OF RACE AND CLASS IN METROPOLITAN AMERICA: 1980, by Donald J. Bogue and David J. Hartmann. Chicago, Ill: Community and Family Study Center, University of Chicago, 1987. 352 pages. $14.95 paperback.

HANDBOOK OF AGING AND THE SOCIAL SCIENCES (2nd ed.), edited by Robert H. Binstock and Ethel Shanas. New York: Van Nostrand Reinhold, 1985. 809 pages. $69.95.

HANDBOOK OF DEMOGRAPHICS FOR MARKETING AND ADVERTISING: Sources and Trends on the U.S. Consumer, by William Lazer. Lexington, Mass.: D.C. Heath, 1987. 211 pages.

PROPOSED REFUGEE ADMISSIONS FOR FISCAL YEAR 1988, Report to Congress, by U.S. Coordinator for Refugee Affairs. Washington, D.C.: U.S. Coordinator for Refugee Affairs, September 1987. 38 pages.

SOCIAL SECURITY AREA POPULATION PROJECTIONS: 1987 (Actuarial Study No. 99), by Alice Wade. Washington, D.C.: Office of the Actuary, Social Security Administration, U.S. Dept. of Health and Human Services, August 1987. 43 pages.

A TIME-ALLOCATION STUDY ON RURAL WOMEN: An Analysis of Productive and Reproductive Roles, by Amara Soonthorndhada et al. (IPSR Publication No. 105) Thailand: Institute for Population and Social Research, Mahidol University, January 1987. 83 pages.

TECHNICAL PROSPECTS AND POPULATION TRENDS, edited by Thomas Espenshade and George J. Stolnitz. Boulder, Colo.: Westview Press, 1987. (AAAS Selected Symposium, #103) 211 pages. $19.95 paper.

WORLD REFUGEE REPORT, by U.S. Dept. of State, Bureau for Refugee Programs. Washington, D.C.: Department of State, September 1987. 78 pages.

SPOTLIGHT

UNITED KINGDOM

Population: 56.9 million (mid-1987 est.)
Land area: 94,212 sq.mi.
Births per 1,000 pop.: 13
Deaths per 1,000 pop.: 12
Rate of natural increase: 0.2 percent
Total fertility rate: 1.8
Infant mortality rate: 9.4 infants per 1,000 live births
Life expectancy at birth: 74 years
GNP per capita: US$8,390 (1985)
Capital: London

by C.M. Marquette

The United Kingdom (U.K.) is officially called the United Kingdom of Great Britain and Northern Ireland, and specifically encompasses England, Scotland, Wales, and Northern Ireland (which have respective populations of 47.1 million, 5.1 million, 2.8 million, and 1.6 million, as of 1985).

Despite a stormy history, in recent times these regions have been almost completely integrated into one encompassing national administrative and political entity (although Welsh and Scottish culture and language still thrive). Northern Ireland alone retains its own parliament and independent history of Catholic-Protestant religious strife.

The end of World War II, successive declarations of independence by colonies, and integration within the European Common Market (EEC) radically altered the U.K.'s economic and geopolitical profile. Growing domestic and socioeconomic differences, as well as generally high unemployment in all sectors, have dominated the last two decades. As colonial sources of import and export waned, the manufacturing and industrial north of England and Scotland as well as the Welsh coal mines were particularly hard hit, while the south of England rebounded with new expanding technological and service industries.

Geographically, the bulk of population is concentrated in southern England, where pastoral rolling hills abruptly segue into sprawling metropolitan areas.

The total population of Greater London of 7 million is organized into 32 independent boroughs, each with its own residential, business, and cultural area. Large cities in both the North and South have developed strong ethnically distinct pockets. It is currently estimated that 2 percent of the total population is of West Indian, Pakistani, or other foreign origin, as a result of extensive long-term immigration to Britain from excolonial and now Commonwealth countries of Africa, Asia and the Caribbean (recent government efforts have restricted these flows). In the 1980s the pressures of unemployment and adverse economic and community conditions have often ignited fires of racial tension and violence within and between such urban communities.

The U.K. has no explicit population policy. However, family planning services are provided on demand from general practitioners, clinics, and hospitals as part of the government-run Nationalized Health Service (NHS) that covers all citizens. Relaxation of the country's marriage and abortion laws in the late 1960s significantly altered both marriage and contraceptive patterns resulting in a dramatic increase in contraceptive use, abortion, and divorce, though there is currently a proposal in Parliament to put greater restrictions on abortion. The pill remains the most popular form of contraception among younger women with the use of sterilization growing among older women.

Along the Thames in London

The often overlooked ethnic diversity of Great Britain, especially in urban centers such as London, corresponds with significant subpopulation differentials in marriage and contraceptive use. The diversifying population is also reflected by diversity in general standards of living. Recent government health reports have suggested clear residential differentials in health with much higher risks of sickness or death from cardiovascular disease prevailing in the north of England where stress of unemployment, poverty and poor diet are more widespread than in the south.

Due to its low fertility and high life expectancy, Great Britain shares with other developed countries an aging population structure. This has evoked concern over the "dependency ratio" of the growing number of elderly in relation to a continually smaller, younger, working population. Specific concern exists over the country's extensive pension schemes on which more elderly will rely and to which less working people will lend support. The domestic and complex nature of this issue summarizes the shift in population concerns during recent decades in the U.K., which after a centuries-old history of consolidation is now becoming more diversified.

C.M. Marquette, a PRB intern, holds an MSc. in demography from the London School of Economics.

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POPULATION TODAY

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3 **World Bank sees an "ultimate" world population of 10.4 billion in 2100**
The rankings shift as less developed nations continue to grow

4 **IUD to be offered again**
Contraceptive device returns to U.S. (in the rest of the world it never left)

5 **Sri Lanka: an LDC with fertility near MDC levels**
Asian island nation has total fertility rate of 2.8 children per woman

6 **China—Not exactly "one child per couple," but population aims on track**
A conversation with the head of the Family Planning Commission

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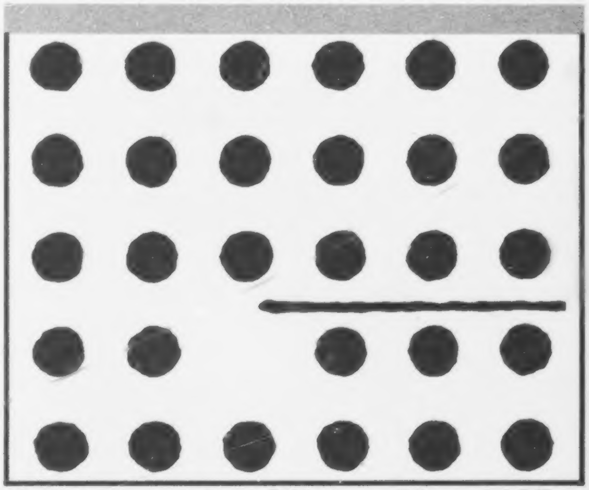


What's the line pointing to? What are all these dots? (See page 2.)

A publication of the Population Reference Bureau, Inc.

FROM THE EDITOR'S DESK

The way some people toss around the term "one million," you'd think it was only a humble unit in their oh-so-important scheme of things. Feel like a million; a million galaxies; a million-dollar start-up grant

Want to get a handle on this august quantity? Politicians' analogies might help (a million dollars in one-dollar bills would make a stack as tall as ...). But surely the clearest description of this famous mega-number is to be found in a book published in 1970 by Simon and Schuster.

Compiled by author Hendrik Hertzberg and now sadly out of print, the book *One Million* consists of 200 pages. On each page is an array of 5,000 black dots arranged in a 50 by 100 matrix.

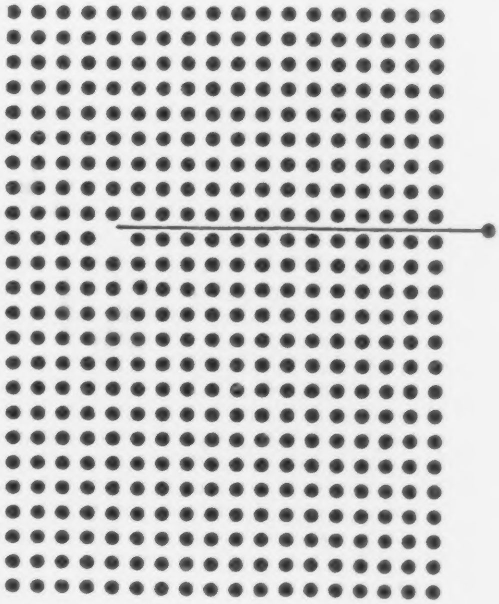
In sum, between the two covers of *One Million* are precisely 1 million dots. Some of these are more equal than others and are annotated by Hertzberg; the 941,937th dot and its predecessors, for example, equal the number of males in Iowa in 1970.

The page portion reproduced below will likely (a) cause a soul-searching reevaluation of your grasp of huge numbers, and (b) make plainer mathematician Leopold Kronecker's classic epigram that "God made integers; all else is the work of man." No question about it – *One Million* is a book in a million.

– Art Haupt

SPEAKING GRAPHICALLY

Part of a page from One Million



941,937 – Men and boys over 14 in the State of Iowa, compared to 999,250 girls and women.

One Million © 1970 Bradley Smith – Hendrik Herzberg

POPULATION TODAY

VOL. 16, NO. 1 **January 1988**

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Projecting a World of 10.4 Billion

The World Bank will soon release its latest (1987-1988) global population projections for countries of the world, carried out as far as 2100.

Except for a slight upward revision in totals, the forthcoming version differs little from those in the Bank's 1985 projection. A closer look reveals that this upward revision is mostly accounted for by South Asian and West Asian countries. The outlook for other regions has either varied little from previous ones or dropped somewhat – except for countries of Africa, where a large upward revision was made for Kenya, Ethiopia, Burkina Faso, Nigeria, and Egypt.

The Bank devotes some of the report to explaining its methodology, data sources, and assumptions and comparing its projections with those of the UN. Its base data include Bank's own estimates based on more updated data collected by the Bank's economist and projection officers. Differing from the UN's method, the Bank prepared its figures taking into account not only geographic region but also level of development and national income. (Years ago the Bank prepared its population projections for internal use, but began to distribute these figures to an international audience in 1984.)

World population is projected to rise from 4.8 billion in the base year of 1985 to 6.2 billion in 2000, 9.5 billion in 2050, with ultimate population size projected to reach 10.4 billion in 2100, more than twice its present level.

All this assumes that world fertility will decline to replacement level sometime between 2035 and 2045 for most less developed countries, and between 2000 to 2020 for the more developed countries and those countries where significant fertility reduction has already been achieved, such as China and India.

The Bank expects the birth of the 10 billionth person to occur around 2070, but by then population growth will have almost stabilized, and there will be no 11 billionth person. By 2100, 87 percent of global population would live in today's "less developed countries."

Projected Population of the 15 Most Populous Countries (in Millions) in 1985 and 2100

1985 ranked by pop. size		2100 ranked by pop. size		
1. China	1,040	1. China	1,683	(2010)
2. India	765	2. India	1,678	(2000)
3. USSR	277	3. Nigeria	529	(2035)
4. United States	239	4. Pakistan	395	(2035)
5. Indonesia	162	5. USSR	385	(2020)
6. Brazil	136	6. Indonesia	363	(2010)
7. Japan	121	7. Brazil	292	(2010)
8. Bangladesh	101	8. United States	279	(2020)
9. Nigeria	100	9. Ethiopia	204	(2040)
10. Pakistan	96	10. Mexico	197	(2010)
11. Mexico	79	11. Iran	157	(2020)
12. Vietnam	62	12. Philippines	137	(2015)
13. W. Germany	61	13. Egypt	132	(2020)
14. Italy	57	14. Japan	124	(2020)
15. U.K.	56	15. Tanzania	123	(2035)

Note. Year that country achieves replacement level fertility (approximately 2.1 lifetime births per woman) is given in parentheses. In the case of the U.S. and Japan, this assumes a slight rise in fertility; all others are assumed to fall to this level.

Source. *World Populations 1987-88: Short- and Long-term Estimates by Age and Sex with Related Demographic Statistics* (forthcoming).

The world's annual population growth rate is projected at 1.7 percent for 1985-1990, and 0.9 percent for 2020-2025, and will continue to decrease to 0.07 percent in 2100, due to a considerable decrease in the global birth rate and a moderate decrease in the death rate.

> Among developed countries, only the USSR, the U.S., and Japan will remain among the top 15

The most drastic decline in the birth rate is projected for the African population. Africa's death rate is also projected to decreases greatly, while the death rate elsewhere declines only slightly. (The death rate is projected actually to increase in the more developed countries because of population aging.) Nonetheless, the projected ultimate population of the sub-Sahara region will be nearly five times its present size.

The lowest annual growth rates are projected for Europe, followed by North America. Among Asian countries, China is growing the slowest, while Sri Lanka, Pakistan, and Bangladesh have the highest growth rates.

The accompanying table shows the Bank's "Top 15" in national population size, as of 1985 and as of 2100 (projected). The 2100 population also stands as the ultimate projected population for each country. In 2100, it is anticipated that China will remain at the top of the population mountain. India is expected to start adding more people per year to its population than China, but even so will never overtake its more populous neighbor.

Comparing the top 10 countries in 1985 and 2100, except China and India, the relative country rankings ranking of ultimate population size in 2100 are expected to be somewhat different from those in 1985. Nigeria will be the

Continued on next page

10.4 Billion

Continued from preceding page

third with its very high growth rate. Pakistan, which was ranked 10th in 1985, will rise to fourth by 2100. Ethiopia and Mexico will join the top 10, with Japan and Bangladesh dropping off. Among more developed countries, only the USSR, the U.S., and Japan will remain among the top 15.

The World Bank's *World Populations 1987-88: Short- and Long-Term Estimates by Age and Sex with Related Demographic Statistics* will be published in book form in early 1988.

– Machiko Yanagishita

Census Controversy

The Census Bureau has long prided itself on the noncontroversial impartiality of its number-crunching. Even impartial number-crunching can become enmeshed in strife, however.

Barbara Bailar, an associate director for statistical standards and methodology and president of the American Statistical Association, has resigned from the Census Bureau. Bailar did not make public her reasons for leaving Census. But on Oct. 20, 1987, the Commerce Dept. announced that the 1990 Census would be conducted without any adjustment for undercount (see December 1987 *PT*). Bailar had developed what she believed was a reliable statistical method, based upon a postcensal survey of 300,000 households, for adjusting the count.

The *Washington Post* suggests that the Bailar resignation was due to the decision, quoting an unnamed source in the statistical community that "it wasn't the fact they decided not to adjust but the fact that political factors may have entered into the decision."

In the view of most statisticians, a census adjustment would most likely result in hiking the population counts of urban areas, which contain high concentrations of minorities and which traditionally vote Democratic. Ultimately, the chief purpose of the U.S. decennial census is a political one: to apportion seats in the U.S. House of Representatives and state legislatures – hence the controversy.

– C.H.

New York Loses Census Case

A verdict has finally been rendered in the eight-year-old New York suit against the U.S. Census Bureau. A federal court has decided that the Bureau does not have to adjust its decennial population count to compensate for any expected undercount.

Judge John Sprizzo of the U.S. District Court in New York ruled Dec. 8 against the suit brought by the city and state. The suit had mandated an undercount adjustment be included in the final population totals. Because minority groups tend to be undercounted more than the total population, and because such groups are disproportionately concentrated in New York City compared to the country as a whole, undercounting could mean that the city could lose federal grant money calculated on a per capita basis, and could even affect the decennial apportionment of the House of Representatives.

The New York suit is one of the legacies of the 1980 Census. The case originally went to trial in 1980 and at that time was decided in favor of New York, but the appellate court reversed the decision and sent the case back to the lower court for reconsideration (in time for the Bureau to actually release the census results). In January 1984, a second trial in New York was held, and the decision of Dec. 8, 1987 is the result.

The ruling is not related to the recent Commerce Dept. administrative decision (see *PT*, December 1987) that the Bureau will conduct the 1990 Census "straight," with no statistical adjustments for the actual count.

– A.H.

Voters and Nonvoters

The links between demography and the U.S. election process are explored in the newest report in PRB's *Population Trends and Public Policy* series. Elections allow Americans to choose their representatives in government. But only 46 percent of the voting-age population cast ballots in the 1986 elections. U.S. demography has a bearing on who votes and which candidate is likely to win.

The greater the age, education, and income of an individual, the more likely he or she is to vote. These demographic factors are related to other characteristics like home ownership, ethnicity, and occupation which are also linked to the "propensity to vote."

Faced with escalating campaign costs, some political consultants are using the demographic data now available on computer to help maximize advertising, fund raising, and "get-out-the-vote" efforts by pinpointing geographic areas with likely voters.

Another new development in campaign tactics is the "enhancement" of political data bases by merging demographic and other geographic-based data with names and addresses from commercial mailing lists.

– M.K.

Copies of *Election Demographics*, by political consultant David B. Hill and PRB demographer Mary M. Kent, are available for $3.00 per single copy; 2-10 copies, $2.30 each; 11-50 copies, $1.90 each; 51 or more, $1.50 each. Orders of $50 or less must be prepaid and include $1.00 for postage and handling. Send order and remittance to Population Reference Bureau, Inc., Circulation Dept., P.O. Box 96152, Washington, DC 20090-6152. Make checks payable to PRB.

The IUD Returns

The IUD is back. The contraceptive device is again being provided in the U.S., after almost disappearing from the list of available contraceptives in this country.

In October 1987 the nonprofit Population Council announced in New York that it had acquired the rights for the Copper T 380A IUD, and would license it to GynoMed Pharmaceutical, Inc. for marketing.

Once one of the most popular methods of contraception in the U.S., the intrauterine device fell in popularity (as have, to some extent, oral contraceptives) out of fear of harmful side effects in some cases. The Dalkon Shield, which was sold until 1974, was pulled from the market following reports of such side effects, which caused thousands of suits to be brought against its maker, A.H. Robins.

Continued on page 8

SURVEY REPORT

Sri Lanka

World Bank

Women laborers on plantations are most likely to be surgically sterilized.

The results of a 1987 Demographic and Health survey show that Sri Lanka, the island nation just off the southeastern coast of India, has relatively good immunization coverage, increasing contraceptive use, and declining fertility. The survey of 5,865 ever-married women 15 to 49 years of age was national in scope, although it excluded less populous districts in the north and east of the country.

Beginning in the early 1980s, these districts have experienced the worst of the ethnic violence between extremists within Sri Lanka's largest minority, the Tamils, and the numerous and politically powerful Sinhalese.

Sri Lanka is one of the more fortunate South Asian countries, its current political unrest notwithstanding. While it is not as developed economically, its population has higher literacy rates and enjoys better health than the average for that region. In the 1960s and 1970s, the total fertility rate (the average number of lifetime births per woman) dropped from over 6.0 to 3.4. A "marriage boom" in the late 1970s contributed to a temporary increase in fertility to a 3.7 child average, reflected in the 1982 Sri Lankan Contraceptive Prevalence Survey. This 1987 survey shows that Sri Lankan fertility resumed its decline in the 1980s, recording an average TFR of 2.8 children between 1982 and 1986.

Contraceptive prevalence also increased. An estimated 62 percent of married women 15 to 49 were currently using birth control in 1987, compared to 55 percent in 1982 and only 32 percent in 1974. Contraceptive use as a whole now approaches U.S. levels (68 percent in 1982). Less effective traditional methods account for some of this; in 1987, 21 percent of the married women relied on rhythm, withdrawal, or prolonged abstinence for birth control.

However, 30 percent of the currently married women were protected by the most effective method – sterilization. Relatively small percentages relied on modern personal methods of birth control such as the pill and condoms, or on clinically supplied methods like the IUD and injection. Clearly, women were less likely to use methods which require repeated visits to a clinic or a pharmacy.

This preference probably reflects the type of family planning services available. Women living on "estates," primarily laborers on large tea, rubber, and coconut plantations, and the least educated women were most likely to have been surgically sterilized.

Nearly 80 percent of the women over 30 said they did not want any more children. About 69 percent in this age group were contracepting, 37 percent were sterilized or had husbands who were sterilized. This desire by older women to limit fertility is borne out in the fertility rates: The substantial drop in the TFR between 1974 and the 1982 to 1986 period was due entirely to declines in childbearing among women aged 30 and older.

The 1987 DHS survey found that recent child immunization campaigns have been fairly successful, except among the estate populations. Of the 77 percent of children under age 5 with a health card, over 80 percent had received the polio and diptheria-pertussis-tetanus vaccines, but only 48 percent had received a measles vaccine. Many of the 23 percent of children without a health card came from the estate populations, and from households in which the mother had no education.

Almost all Sri Lankan pregnant mothers received prenatal care and 87 percent of births during the 1982 to 1986 period were assisted by medically trained personnel, a partial explanation for the low infant mortality rate and generally good health status of Sri Lankan women.

– M.K.

DEMOGRAPHER'S PAGE

A Talk with China's Wang Wei

by H. Yuan Tien

On Sept. 22, 1987, the last day of a three-week visit to Beijing, I met with Wang Wei, head of China's Family Planning Commission.

The meeting was quickly scheduled and most informal. I arrived in the Commission's office building at 2 o'clock; with open collar and shirt-sleeves rolled up to just below the elbows, Mr. Wang warmly extended his hand to greet me as he spryly descended the staircase. In the reception room, we sat on two sofas sandwiching a tiny tea table. An aide filled the cups and immediately withdrew. The only other person present was Liang Zhongtang, Director of the Office of Population Research, Shanxi Academy of Social Sciences, who had suggested and arranged the meeting the day before.

Born in 1919, Mr. Wang is a native of Hebei province, which surrounds Beijing. His Putonghua (spoken Chinese) carries the thick accent of Shandong, a province to the south. The years have turned his hair white but have had only slight impact on his face and none at all on his sparkling eyes.

Beyond Shortened Motherhood

Following brief pleasantries, Mr. Wang began by asking if there had been any new assessments of recent Chinese population trends, most particularly the rise in the birth rate to nearly 21 per 1,000 population in 1986 from the official figure of around 18 in 1983-1985. I knew of none, unless one counts some pejorative statements in the foreign media that have alleged a growing ineffectiveness in China's population programs.

Xinhua News Agency

Wang Wei.

He explained that there are now many more young people of reproductive age on account of the Chinese baby boom 20 years earlier. I interjected that the rise is probably owed in part to underreporting of births in 1983-1985. He quickly acknowledged this and added that because of rural couples' desire to have a son, underreporting has been prevalent when their first child is a girl.

> Underreporting and the small number of ensuing second births are not the issue.

But, he said, this underreporting and the ensuing small number of second births were not the issue. China's immediate problem, rather, lay in the reemergence of early marriage and early reproduction. These demographic trends inevitably exacerbate the impact of the baby boom and materially account for the recent rise in the birth rate. More important, they increase the likelihood of more second births as young men and women marry and have their first child earlier than did their counterparts in the 1970s.

I alluded to the probability of growing premarital sexual activities among youth. Mr. Wang took exception to this. I pointed out that China's population planning programs are not a cause in this regard, but that increased mobility, later marriage, more frequent contact between young persons, and the information included in high school textbooks on population planning could have contributed to it. He acknowledged that premarital sexual activities are on the rise, particularly in the cities.

As we talked about my research on the ramifications of China's family planning program,[1] he emphasized that the problem of finding work for young Chinese women who have completed their childbearing while in their early 20s had already come to his attention during his tours of the country. The urgency of the matter is greater in the countryside than in the cities (where meaningful alternatives to childbearing are more numerous), he said. Rural men are acutely affected by the need to address the aspirations and demands of their wives who are being suddenly liberated from the burden of extended childbearing.

China's Demographic "SDI"

I next gave Mr. Wang the April 1986 issue of *Population Today*, including my article on the continuing discussion inside China of the "one child per couple" policy. The article contained long passages from Mr. Wang's 1985 keynote speech at the Fourth National Conference of the China Demographic Society. It also detailed for the first time a Chinese view urging a second child 8-10 years after the first birth for up to 70 percent of the couples affected by the policy.[2]

I mentioned as well a warning appearing in *People's Daily* issued by the Research Center for the Promotion and Development of Technology in Beijing that if population growth is not strictly controlled and China's fertility continues unabated, the country's population at the century's end will exceed 1.3 billion.[3]

China's family planning program –

H. Yuan Tien is Professor of Sociology at the Ohio State University and a past Visiting Scholar at PRB

what might be called its Strategic Demographic Initiative – dates from the early 1970s. One stated goal of China's "SDI" was, Mr. Wang pointed out, to keep the total population "within 1.2 billion." This was established in the late 1970s when China's TFR was estimated to be at least 2.3. Thus, only with nearly full implementation of the "one-child" policy would it be possible to achieve this goal.

However, actual experience has made it necessary to accept the possibility of a total population of "around 1.2 billion" and, more recently in the words of Premier Zhao Ziyang, of "1.25 billion." Even this might be exceeded, Mr. Wang continued, because of the practical difficulties involved in further extending the acceptance of the "one-child" ideal.

With visible compassion, he voiced his deep concern for many couples in the poorer areas of China who would suffer major hardship if they only had one child. He also sympathetically recognized the need to continue exempting the country's many minority nationalities from the policy.

We agreed that since the early 1970s, the impact of China's SDI has been substantial. At the time of the program's start China's birth rate was nearly 34 and its TFR exceeded 6 (the current TFR is about 2.4). Although far from the calculations based on "one child per couple," the successes of China's initiative have been, and continue to be, impressive. Frequent childbearing among the Chinese is largely a thing of the past.

Reflections

Worldwide fascination with China's family planning program has been enormous. It has fed on the voluminous documents, statistics, pronouncements, reports, etc., concerning the program's many facets. There has, however, been a lack of information about its architects and implementors.

Created and given cabinet status in 1981, China's Family Planning Commission supplanted the Family Planning Leading Group (or Task Force) that was established in 1973 to set policies and administer programs. Madame Chen Muhua, the last chief of the Task Force, became the Commission's first head. Both immediately before and after the reorganization, Madame Chen played a major role in policymaking, after demographic research had been neglected in China for some 20 years. She accepted recommendations that were put together by statisticians, economists, system analysts, and others, who in late 1978 vigorously pushed for quantitatively specific population planning targets in general, and the "one child per couple" norm as the centerpiece of China's Strategic Initiative in particular.[4]

This marked a far-reaching diminution in fertility options – e.g., "One is not too few, two are ideal, and three are too many" – simultaneously alluded to in the Zhou Enlai Model during the initial years of China's SDI. Thus, when Dr. Qian Xinzhong (who is a physician) succeeded Madame Chen a year after the Commission was established, the scope and specifics of China's SDI remained firmly delimited. This made the implementation of the new measure Dr. Qian's first and foremost assignment in 1982-1983.

Wang evidently has helped to moderate the advocacy of minimal reproduction

Mr. Wang assumed his post in late 1983. At that time China had already accumulated much experience in population planning in general, and reactions to the policy of minimal reproduction then abounded. Mr. Wang also led the Chinese delegation to the 1984 International Conference on Population in Mexico City. In the declaration issued at the conference's end, the injunction against high fertility argued that the fertility interests of the couple and society be balanced as a nation attempts to cope with consequences of population growth within the framework of socioeconomic development.

In China's case, the stipulations to stop at only one child apparently proved too strict for the couples affected by it, who proved capable of fending for their own interests. Numerous exemptions to the one-child ideal, for instance, have already been added to all provincial regulation. Promotion of the one-child ideal notwithstanding, China's TFR still hovers around 2.4. Now that their fertility is much lower than in previous decades, young Chinese couples have heeded the general terms of China's Strategic Demographic Initiative – but, in bearing one or two more than minimal reproduction, they have also demonstratively set limits to China's SDI.

Part of the increased realism may be surmised from the fact that the other person present at our Sept. 22 meeting, Mr. Liang Zhongtang, originally proposed in 1979 the option of a second child after an interval of 8-10 years. Mr. Liang now is in charge of an experimental population planning program based on his proposal. This experiment has been in progress during the last few years in Yi County of his native province of Shanxi.

Conversation with Mr. Wang also provided a final piece of the puzzle as to why, in his speech at the Fourth National Conference of the China Demographic Society, he omitted any reference to the one-child policy. More important, it also disclosed much sensitivity on his part to sociological issues arising from population planning. His utterances during our hour-long conversation indicated compassion and pragmatism in the discharge of his duties. It fleshed out his 1985 concern that, beside effectively controlling population growth, population planning programs "must also bring closer together the Party and the people as well as enhance stability and unity."[5]

Continued on next page

Demographers Page

Continued from preceding page

As third head of the Family Planning Commission after having served as the senior deputy head under Dr. Qian, Mr. Wang clearly has been in a better position that his predecessors to draw lessons and to "seek truth from fact." In China, as the warning cited earlier in the *People's Daily* suggests, the one-child fertility debate is still continuing in various circles. He evidently has helped to moderate the advocacy of minimal reproduction. He has emerged as a maker as well as an implementor of policy. His remarks stem from the interplay of his dual roles in policymaking and policy implementation and, therefore, carry considerable weight.

Hearing them thus is far better than seeing 10,000 numbers. As we said good-bye, Mr. Wang warmly and repeatedly asked that our conversation be continued whenever I return to Beijing.

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3. *People's Daily* (Overseas Edition), July 5, 1986.
4. For a comprehensive account of this in English, see Jian Song, Chi-hsien Tuan, and Jing-yuan Yu, *Population Control in China*, New York: Praeger, 1985.
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IUDs

Continued from page 4

The reason IUDs were virtually taken off the market in the U.S. was manufacturers' fear of product liability suits from users. Even though the IUD is considered a safe and reliable contraceptive for many users, the cost of even successful legal defense has had a chilling effect on manufacturers. (IUDs continue to be a major form of birth control in other countries and are the most prevalent contraceptive method in China.)

In 1986 two major IUD manufacturers, Ortho Pharmaceutical and G.D. Searle, halted sales, which together had accounted for 95 percent of the U.S. IUD market and 100 percent of the copper-bearing IUD market. Since that time the Alza Corporation had been the only U.S. producer; Alza urges doctors to ask women patients to sign a consent form before using their hormone-releasing Progestasert IUD.

GynoMed is using a similar consent form, in which the woman acknowledges in writing that she has discussed the risks and benefits of the IUD with her doctor.

—A.H.

Birth Control, Fertility In 110 Countries

During the past two decades a historic family planning revolution has taken place around the world.

The extent of its progress has varied from place to place. But the new "World Access to Birth Control" data sheet, published by the Washington-based Population Crisis Committee, graphically traces the course of this revolution in 95 less developed and 15 developed countries that together include over 95 percent of the world's population.

The data sheet does so by summarizing two variables: (1) the percentage of decline in the country's total fertility rate (TFR: the lifetime number of children per woman) from 1970-1975 to 1985-1990 (projected); and (2) access to contraceptive methods in each country.

Not surprisingly, the two variables are related. Countries scored high by PCC in birth control access tend also to show significant reductions in fertility. The top 10 less developed countries with the best birth control access, as scored by PCC according to a formula that takes into account availability of method and information, the level of government funding, and similar factors, are:

1. Taiwan
2. Singapore
3. South Korea
4. China
5. Hong Kong
6. Colombia
7. Sri Lanka
8. Panama
9. Cuba
10. Mexico

PCC calculates that out of the 2.8 billion people in developing countries outside China, 660 million are women in the reproductive ages 15-49. About 460 million of these are sexually active; excepting those who are infertile or already pregnant, about 370 million women can be considered at risk of pregnancy. Of those at risk, 124 million are now using an effective contraceptive method, while the remaining 250 million are unprotected.

PCC provides the "World Access to Birth Control" wall chart (18 x 24 inches) free on request in limited quantities. Contact: Population Crisis Committee, 1120 19th St. N.W., Washington, D.C. 20036. Attention: Julie Norbury.

The Unfinished Story

Millions of couples in the less developed countries lack the means to plan their families, despite the fact that half the 463 million married women of reproductive age outside China want no more children and millions more would like to delay their next birth, writes Jodi L. Jacobsen, author of "Planning the Global Family," the latest in the *Worldwatch Paper* series published by the Worldwatch Institute.

Despite slowing world population growth rate since the early 1970s, annual additions to world population have increased from 74 million in 1970 to 86 million in 1987. "If the needs of even half of the women lacking access to family planning had been satisfied, annual additions to human population would now be falling instead of rising," Jacobsen says.

In the developing world, only Cuba, Singapore, South Korea, and Taiwan have achieved replacement level fertility. Impressive reductions have been made in Brazil, China, India, Indonesia, and Mexico, but fertility rates remain moderately high – above 3.5 children per woman – in all but China. And pockets of extremely high fertility – above 6 children per woman – still exist throughout Africa and the Middle East.

"The recent experiences of several nations," Jacobsen notes, "suggest a close relationship between effective voluntary family planning programs, rising levels of contraceptive use, and declining fertility even in the absence of broad-based economic gains." Even so, few countries have put family planning at the top of their agendas.

The gap between family planning use and desire means the developing-country population will grow faster than need be. "Countries that remain on a high fertility path will find that meeting basic subsistence needs will be increasingly difficult in the years to come," the *Worldwatch Paper* argues.

Moreover, family planning offers significant health benefits. Each year up to a million women worldwide die from pregnancy-related causes. Fully 99 percent of these deaths occur in the Third World where complications arising from pregnancy and illegal abortions are the leading killers of women in their 20s and 30s. At least half of all maternal deaths could be averted through a combined strategy of family planning, legal abortion, and primary health care, according to the paper.

– J.A.

To order "Planning the Global Family," *Worldwatch Paper 80*, contact: Worldwatch Institute, 1776 Massachusetts Ave. NW, Washington, D.C. 20036. $4.00 for 1 copy. Multiple copy price information available from Worldwatch.

SOFTWHERE

For those microcomputer users with an interest in Canadian data, *PT* has come across a wealth of data on diskette on population, vital statistics, and manufacturing.

The three-part data package comes from Statistics Canada: Part 1 includes data for census divisions (Atlantic, Quebec, Ontario, and the Western provinces) as well as the entire country. Part 2 is a software utility for accessing the data, which can also be used in Lotus for custom analysis. Part 3 is a comprehensive guide explaining the variables and using the data diskettes on an IBM PC or compatible computer.

There are 15 diskettes covering Canada as a whole and one to three diskettes covering each division. Statistics Canada, Small Area and Administrative Data Division, offers the three parts for $360 for Canada or $99 per division. This is a real bargain for the amount of data available on vital statistics, population, migration, incomes, unemployment, farms, building permits, and manufacturing industries. The data cover 1977 to 1983 and will be annually updated.

Contact Cecile Dumas of Statistics Canada at 613-951-8525 for inquiries and purchase information.

– D.L.

POPULATION UPDATE

Estimated United States Population:

As of September 1, 1987	244,202,000
As of September 1, 1986	241,995,000

The above estimates, the latest available, include armed forces overseas and are from U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1013.

Estimated World Population:

As of January 1988	5,076,000,000
Annual growth	87,000,000

Estimated by extrapolation from the mid-1987 population on PRB's *World Population Data Sheet.*

Latest Provisional Statistics for the U.S.: August 1987

	12 months ending with August					
	Number		Rate			
Item	1987	1986	1987	1986	1985	1984
Live births	3,788,000	3,728;000	15.6	15.5	15.8	15.5
Deaths	2,114,000	2,095,000	8.7	8.7	8.8	8.6
Natural increase	1,674,000	1,633,000	6.9	6.8	7.0	6.9
Marriages	2,422,000	2,394,000	10.0	10.0	10.3	10.4
Divorces	1,164,000	1,161,000	4.8	4.8	5.0	4.9
Infant deaths	38,000	39,300	10.0	10.6	10.6	10.7
Population base (in millions)			242.5	240.2	237.6	235.2

Note. Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source. Monthly Vital Statistics Report (Vol. 36, No. 8) from the National Center for Health Statistics.

TAKE A NUMBER

Survey Results: Recent fertility surveys received at PRB report the following: in Morocco, a 1987 survey measured continuing fertility decline with a total fertility rate (TFR) of 4.3 children per woman for the period 1982-1987, down from 5.9 in 1975-1980; contraceptive prevalence among married women for the same periods rose from 19.6 to 35.9 percent. A 1986 survey in Colombia put the TFR at 3.4 for 1981-1986 with 63 percent of married women using some form of contraception. In 1969, Colombia's TFR was reported as 6.7 children per woman. In Nigeria, a survey conducted in Ondo State (containing about 3 percent of the country's population) in 1986 reported a TFR of 6.2 children per woman. About half of the married women had heard of contraception and knew of a source, but only 10 percent had ever used it and only 6 percent were actually practicing some form of family planning. Finally, El Salvador's 1985 survey also reported a considerable drop in fertility, to a TFR of 4.4, down from about 6 in the 1970s. About 47 percent of the currently married women said they were using some method of family planning, a large proportion of these women relying on sterilization. Full reports on these surveys will appear in future *PTs*.

A Question of Numbers:

Recent press reports have noted that the United States is in "last place" among 20 "industrialized nations" in infant mortality. (That is, its infant mortality rate is higher than the others.) Such statements lead one to dwell again on the business of ranking countries on specific subjects, particularly if such rankings conveniently result in press-release-ready phrases such as "last place" and round numbers such as 20. While there is no accepted definition of "industrialized," the most frequently used United Nations definition of "developed" lists over 40 such entities ranging from the USSR to the Channel Islands. In the U.S., the infant mortality rate has been cut in half since 1970, from 20 to 10 infant deaths per 1,000 live births. Declines in other countries, such as Japan, have been more dramatic, down to 6 (a rate which may suggest itself as close to a theoretical minimum), but the U.S. is not at all out of line with many other developed countries such as West Germany, Australia, and the United Kingdom. Not that there isn't an issue here. If the U.S. had Japan's rate, there would be about 21,000 infant deaths annually instead of the current 38,000 (out of 3.8 million births). Much of the higher U.S. rate is rooted in poverty and the resultant lack of prenatal care. Perhaps more sensational statements are needed to grab public attention, but one must wonder about the cumulative effects of what some see as a questionable use of statistics.

– *C.H.*

LETTER TO THE EDITOR

Coverage of California's Section 4213 confidential marriages (see *PT*, November 1987) omitted mention of the most likely cause. The "marriage penalty" of higher federal income taxes encourages couples to "record" their marriages inconspicuously so that they can file as single individuals. State taxes in California exact no marriage penalty, so federal statutes are behind the phenomenon.

If and when the federal marriage penalty disappears, so will "confidential marriages."

Raymond R. White
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City College of San Francisco

ADDENDA

"Our next speaker – an expert on the vanishing middle class . . ."

From the *Wall Street Journal* – Permission, Cartoon Features Syndicate

CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in Current Readings. Publishers may address review copies to Book Review Editor, POPULATION TODAY, Population Reference Bureau, 777 14th St., N.W., Washington, D.C. 20005.

THE TRULY DISADVANTAGED: The Inner City, the Underclass, and Public Policy, by William Julius Wilson. Chicago: University of Chicago Press, 1987. $19.95. ISBN 0-226-90130-0.

I like this type of book. It provides a substantive interpretation, backed by sound statistical information, of a major social problem. Wilson documents the rise of social pathologies such as crime, joblessness, teenage motherhood, welfare dependency, and educational shortcomings which characterize many black inner-city neighborhoods, but he also provides a refreshing interpretation of these facts easily distinguishable from the 1960s "knee-jerk liberal" view or the conservative perspective in vogue during most of the 1980s.

In many ways, *The Truly Disadvantaged* continues a line of thought Wilson started in his controversial *Declining Significance of Race*, published nearly 10 years ago. Then Wilson suggested that the situation of blacks in the mid-1970s must be seen in broader terms than racism. This theme is picked up and amplified in this most recent book which attempts to describe and explain the rise of a black urban underclass. While there is undoubtedly a racial component to this phenomenon, Wilson argues convincingly that race alone is not sufficient to describe what has happened.

It may also gladden demographers' hearts to find that Wilson employs several demographic concepts, such as selective outmigration and differential sex ratios, to help explain the plight of many inner-city blacks. Wilson argues, for example, that middle-class and upper-class blacks left black inner-city neighborhoods in the 1960s and 1970s, leaving behind a group that has become an underclass. The flight of middle-class blacks from these neighborhoods also removed an important element in the social fabric that provided a buffer in earlier times.

Wilson also suggests it is the lack of marriageable black males that is largely responsible for the dramatic increase in out-of-wedlock births and female-headed families in the underclass areas. By calculating a Male Marriageable Pool Index (MMPI), which gives the number of employed males in the same age group per every 100 females, Wilson shows how the marital prospects for black women have fallen during the past few decades and how the marriage prospects of black women are very different from those for white women.

But Wilson's dominant argument attempts to explain the emergence of a black urban underclass as a consequence of the economic transformation that has eliminated large numbers of jobs for unskilled or semiskilled workers in central cities. Wilson also argues that the best remedy for the black urban underclass is not race-specific remedies targeted directly at this group, but rather broad-based full employment policies which will provide job opportunities for this group.

Wilson's book is a refreshing alternative to the conservative explanations that blame government social policy or individual inadequacies for the plight of the underclass, or liberal views that the problem is solely due to racism. Wilson clearly portrays the problem's nature and seriousness, provides a convincing sociological explanation of why it has emerged, and offers some guidelines to formulate new public policies which will deal effectively with it. What more can you ask of an author?

– William O'Hare

PERSPECTIVES ON POPULATION: An Introduction to Concepts and Issues, edited by Scott W. Menard and Elizabeth W. Moen. New York: Oxford University Press, 1987. 487 pages. $39.95 hardback, $24.95 paper. ISBN 0-19-504092-9.

In the expanding field of demography and its increasing number of textbooks, *Perspectives on Population* is a distinctive work. Menard and Moen are providing a reader to be used in undergraduate or graduate courses. The book can stand on its own or with limited supplementary material as the primary text in a course on population.

Each section has an introduction which briefly summarizes the fundamental material on the basic rates and measures presented in most population textbooks and a list of suggested books which provide more extensive detail on the topics. Then, studies by eminent people in the field, such as Ansley Coale, Philip Hauser, Kingsley Davis, John Bongaarts, and Samuel Preston, are presented. The thoughtful, diverse selection of the studies not only illustrates their demographic as well as societal importance, but also stimulates the students for lively discussions in the class. These range from Hardin's "The Tragedy of the Commons" to Simon's "World Population: An Anti-Doomsday View"; from China's one-child family policy and fertility policy in India to explicitly pronatalist policies in Eastern Europe. Overall, this is a book that shows population in its different roles as dependent and independent variable.

– Nazy Roudi

SPOTLIGHT

FRANCE

Population (1986 est.): 55.6 million
Land area: 212,668 sq. mi.
Births per 1,000 pop. (1986 est.): 14
Deaths per 1,000 pop. (1986 est.): 10
Rate of natural increase (1986 est.): 0.4 percent
Total fertility rate (1986 est.): 1.8
Infant mortality rate (1986 est.): 8.1 infant deaths per 1,000 live births
Life expectancy at birth (1986 est.): 75 years
GNP per capita (1986 est.): $9,550
Capital: Paris

by Wendy Patriquin

France, about the size of Montana and Idaho combined, is the largest country in Western Europe. It was also one of the first countries to make the transition from high to low fertility during the 18th and 19th centuries. Its estimated population in 1800 was 24 million; in 1900, 41 million. The traditional, anonymously coined phrase "50 million Frenchmen can't be wrong" is in a sense a tribute to the stability of France's population size during most of the 20th century.

Prior to World War II, France's government went through three different periods in political history, or Republics. The First was the period prior to the revolution in 1789, the Second until the Franco-Prussian war (1789-1870), and the Third until France's defeat in 1940. Between 1945 and 1958, a tumultuous period in France, Charles de Gaulle led the Fourth Republic, which ended with governmental division over the future of Algeria. The current constitution, established under the Fifth Republic in 1958, puts executive power in the hands of the President.

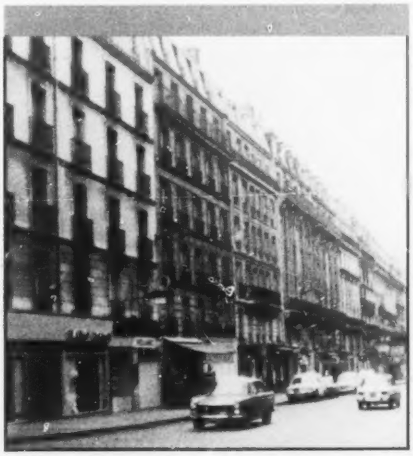
The majority of the population (about 90 percent) is Roman Catholic. French is the primary language, although there are small groups of Breton and Basque speakers.

Possibly because of the country's early fertility decline, French people never emigrated on the scale of some other European nations; on the contrary, France has often experienced waves of immigration. Between the two World Wars, about 3 million people entered the country. After the establishment of an independent Algerian state in 1962, about 1 million French citizens in Algeria emigrated to France. As of December 1982, France's immigrant population was officially estimated at 4.5 million.

Resident aliens fall into two main groups: Southern Europeans (52 percent), and North Africans (26 percent), the two principal nationalities being Portuguese and Algerian.

As Western Europe's leading agricultural producer, France uses nearly 60 percent of its land for farming. Agriculture employs only 7.8 percent of the labor force, down from 15 percent in the late 1960s.

Also a large industrial nation, France's industry grew 33 percent between 1970 and 1980 and has continued to grow at a slower rate. The current government of Jacques Chirac is in the process of privatizing 65 state-owned industrial, banking, and financial holding companies, including companies that had been nationalized by the Socialist government in 1982. It is hoped that the sale of these state-owned companies will reduce the state debt.



The Left Bank of Paris (whose metropolitan population tops 10 million).

There have been some recent shifts in policies and attitudes toward immigrants, perhaps spurred by recent double-digit unemployment. Few new foreign workers are accepted and most new immigrants arrive for purposes of family reunification. One leading conservative has even called for the expulsion of North African immigrants.

Currently, the government considers that the fertility level is low and has declared a subtle pronatalist policy with incentives to increase fertility. These measures include family allowances, a special grant for the third child, maternity leave, and easier housing loans for growing families.

France's birth rate was among the highest in Europe from 1945 until the late 1960s, when it began to decline. In the past few years, the level of births has continued to fall, yet France's birth rate is still higher than that of nearly all other West European countries except Ireland. In 1986, the birth rate was 14.0 births per 1,000 population, a level it has hovered at since 1975, down from about 18.0 in the mid-1960s and up from 13.7 in 1983. Mortality has remained around 10.0, and infant mortality has been declining steadily in the postwar period. France's total fertility rate currently stands at 1.84, up from 1.78 in 1983.

The percentage of births out-of-wedlock has been increasing in recent years and stood at 19.6 percent of all births in 1986, up from 8.8 percent in 1977.

POPULATION TODAY

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FEATURES

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Other states also shine in latest growth figures: Nevada, Arizona, New Hampshire

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JUST MARRIED

Harold M. Lambert

Goodbye to U.S. marriage and divorce statistics? (See page 4.)

A publication of the Population Reference Bureau, Inc.

FROM THE EDITOR'S DESK

The age-adjusted death rate for the United States has dropped significantly over the last several decades – from 7.6 per 1,000 population in 1960 to 5.5 in 1985. During the same period, life expectancy at birth increased from 69.7 to 74.7 years. Encouraging numbers. And given adequate research funding, who knows how long human life expectancy could be. Life extension! Human immortality!

Now suppose we were so successful that only *one* rare cause of death remained in the U.S., e.g., "struck accidentally by falling object," Cause E-916 in the International Classification of Diseases. (Cause E-916 is mainly job-related; during the working ages it reaches 0.4 deaths per 100,000 people at that age; for those 85 and over, it drops to about 0.2 deaths.)

There's one hitch. Scientists still haven't agreed on the maximum human life span, which has to do with how long our cells will continue to reproduce themselves.

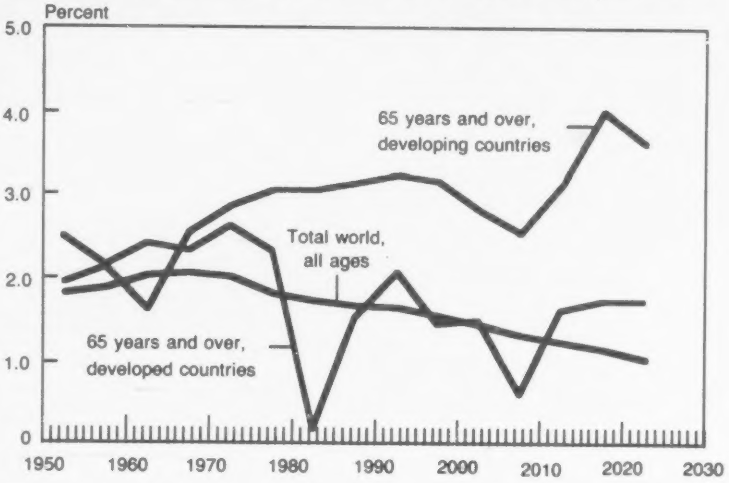
Right now, the human life span exceeds human life expectancy. If all causes of mortality but E-916 were eliminated, life *expectancy* would suddenly exceed life *span*. The biological clocks in any demographic cohort would stop ticking several hundred thousand years before the cohort could be wiped out by E-916's randomly falling objects (bricks, tree limbs, etc.).

Until the day science finds a way to persuade cells to replace themselves indefinitely, extending life expectancy will solve only part of the problem.

– *Art Haupt*

SPEAKING GRAPHICALLY

Average Annual Growth of Elderly Population in More Developed and Less Developed Countries



The world's population aged 65 and over is currently growing at a rate of 2.4 percent annually, the U.S. Census Bureau reports. This increase is substantially faster than the rate for global population as a whole (1.7 percent) and is ascribable to improvements in health care and public health and economic development. (Higher birth rates 65 or more years ago are also a contributing factor.) As a result, as of 1987, there are 290 million elderly on earth, about 6 percent of world population.

From *An Aging World* (International Population Reports Series P-95, No. 78)

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Population State(s) of the Union

State growth patterns shifted a little in 1987, though many recognizable trends continue. The accompanying table ranks the states on both the percent change in population from 1986 to 1987 and the actual amount of gain or loss.

These figures come from the newly released Census Bureau population estimates for 1987. Texas, which had been among the high-growth leaders (along with California and Florida) saw its rate of population growth dwindle from 1986 to 1987. The Lone Star State grew by only 100,000, still enough to have it rank sixth among states in terms of numbers added, but well off its 300,000-per-year clip of the early 1980s before the calamitous "oil bust."

It is quite likely that Texas actually experienced a net loss of people as a result of moves in and out since natural increase (births minus deaths) averages about 180,000 each year and the state's net growth of 100,000 thereby implies out-migration of 80,000.

California and Florida continued to be growth leaders, with the Golden State adding more people in 365 days – a hefty 662,000 – than four states have in *total* population. The Sunshine State added 329,000 and, with retirement migration an important part of Florida's growth, that increase can be expected to continue.

Continuing a trend, the so-called "Rust Belt" of Northeastern industrial states fared moderately well in population growth. It was mostly the North Central and Mountain states that suffered population losses.

Something of a surprise among the growth leaders is New Hampshire, which ranked third in terms of rate of growth, though the rocks and ice of the Granite State seem almost out of place in the company of such Sunbelt heavyweights as Arizona and Florida. New Hampshire, however, has experienced explosive growth in the southern sector near Manchester and Portsmouth, which have grown in their own right and as part of the encroachment north of the Boston metro area.

If that favorite statistical parlor trick of populationists – doubling time "at present rates" – were applied to these states, Nevada could expect to double its population in 17 years, Arizona in 21 years, and New Hampshire in 24 years. In real life, demographic trends are usually subject to change.

To prepare these current state estimates, the Census Bureau relies upon statistical methods which utilize data on school enrollment, births and deaths, tax returns, and other indicators.

– C.H.

1987 State Populations as Estimated by Census Bureau

State ranked by absolute change	1987 (000s)	1986 (000s)	% change	Absolute change (000s)	State ranked by % change*	% change
1 California	27,663	27,001	2.5	662	1 Nevada	4.1
2 Florida	12,023	11,694	2.8	329	2 Arizona	3.3
3 Georgia	6,222	6,100	2.0	122	3 New Hampshire	2.9
4 Virginia	5,904	5,795	1.9	109	4 Florida	2.8
5 Arizona	3,386	3,279	3.3	107	5 California	2.5
6 Texas	16,789	16,689	0.6	100	6 Georgia	2.0
7 North Carolina	6,413	6,331	1.3	82	7 Virginia	1.9
8 Washington	4,538	4,463	1.7	75	8 Delaware	1.7
9 Maryland	4,535	4,461	1.7	74	9 Hawaii	1.7
10 Michigan	9,200	9,139	0.7	61	10 Washington	1.7
11 Tennessee	4,855	4,800	1.1	55	11 Maryland	1.7
12 New Jersey	7,672	7,625	0.6	47	12 New Mexico	1.4
13 South Carolina	3,425	3,381	1.3	44	13 South Carolina	1.3
14 Pennsylvania	11,936	11,894	0.4	42	14 North Carolina	1.3
15 Nevada	1,007	967	4.1	40	15 Vermont	1.3
16 Missouri	5,103	5,064	0.8	39	16 Maine	1.3
17 Ohio	10,784	10,748	0.3	36	17 Tennessee	1.1
18 Alabama	4,083	4,050	0.8	33	18 Rhode Island	1.1
Minnesota	4,246	4,213	0.8	33	19 Utah	1.0
20 Illinois	11,582	1,551	0.3	31	20 Colorado	0.9
21 New York	17,825	17,795	0.2	30	21 Alabama	0.8
Colorado	3,296	3,266	0.9	30	22 Oregon	0.8
New Hampshire	1,057	1,027	2.9	30	23 Minnesota	0.8
24 Indiana	5,531	5,503	0.5	28	24 Missouri	0.8
25 Wisconsin	4,807	4,783	0.5	24	25 Arkansas	0.7
26 Oregon	2,724	2,702	0.8	22	26 Kansas	0.7
27 Massachusetts	5,855	5,834	0.4	21	27 Michigan	0.7
New Mexico	1,500	1,479	1.4	21	28 New Jersey	0.6
29 Connecticut	3,211	3,193	0.6	18	29 Texas	0.6
Hawaii	1,083	1,065	1.7	18	30 Connecticut	0.6
31 Arkansas	2,388	2,371	0.7	17	31 Indiana	0.5
Kansas	2,476	2,459	0.7	17	32 Wisconsin	0.5
33 Utah	1,680	1,664	1.0	16	33 Massachusetts	0.4
34 Maine	1,187	1,172	1.3	15	34 Pennsylvania	0.4
35 Delaware	644	633	1.7	11	35 Ohio	0.3
36 Rhode Island	986	975	1.1	11	36 Illinois	0.3
37 Vermont	548	541	1.3	7	37 New York	0.2
38 Kentucky	3,727	3,726	0.0	1	38 South Dakota	0.1
39 Mississippi	2,625	2,624	0.0	1	39 Mississippi	0.0
40 South Dakota	709	708	0.1	1	40 Kentucky	0.0
– Dist. of Columbia	622	625	−0.5	−3	41 Nebraska	−0.3
41 Idaho	998	1,002	−0.4	−4	42 Idaho	−0.4
42 Nebraska	1,594	1,598	−0.3	−4	– Dist. of Columbia	−0.5
43 North Dakota	672	679	−1.0	−7	43 Iowa	−0.6
44 Alaska	525	532	−1.3	−7	44 Louisiana	−0.8
45 Montana	809	817	−1.0	−8	45 Montana	−1.0
46 Iowa	2,834	2,850	−0.6	−16	46 Oklahoma	−1.0
47 Wyoming	490	507	−3.4	−17	47 North Dakota	−1.0
48 West Virginia	1,897	1,917	−1.0	−20	48 West Virginia	−1.0
49 Oklahoma	3,272	3,306	−1.0	−34	49 Alaska	−1.3
50 Louisiana	4,461	4,499	−0.8	−38	50 Wyoming	−3.4

Source: U.S. Census Bureau news release CB87-205 Dec. 30, 1987

*States ranked by unrounded percent change

Demography Means Business

In PRB's new *Population Bulletin,* "Demographics: People and Markets," co-authors Thomas W. Merrick and Stephen J. Tordella explain in detail current U.S. population trends – how they affect business and how business has taken them into account in planning marketing and product development.

To assist business, a commercial data industry has grown up providing a variety of customized services and statistical products. For example, one demographic data vendor subdivides the nation into 500,000 neighborhoods, each neighborhood fitting one of 40 socioeconomic categories such as "Gold Coast," "Shotguns & Pickups," 'New Melting Pot," and "Golden Pond" – vital information for any business planning to market in those neighborhoods.

The *Bulletin* also includes a series of case studies: for example, how General Motors analyzed worker needs to minimize layoffs, and how a supermarket analyzed its customer base. As Merrick and Tordella point out, in the 1980s as never before, product design and marketing must "be tailored to the tastes and buying power of specific, often disparate, subgroups in the consumer population." And demographic information is essential to identify the "increasingly diverse consumer groups that constitute the modern marketplace."

Merrick is president of PRB; Tordella is general manager of Decision Demographics, PRB's demographic analysis and consulting firm.

– A.H.

Copies of Merrick and Tordella's 48-page *Population Bulletin* (Vol. 43, No. 1), "Demographics: People and Markets," can be ordered from PRB, Circulation Dept., P.O. Box 96152, Washington, D.C. 20090-6152, with checks payable to PRB. Prices are: $4.00 per single copy; 2-10 copies, $3.00 each; 11-50 copies, $2.50 each; over 50, $2.00 each. Orders for $50 or less must be prepaid and include $1.00 for postage and handling.

Marriage Data Not Vital?

Collection of national marriage and divorce data – two fundamental components of vital statistics -- may be suspended in April 1988 by the U.S. National Center for Health Statistics (NCHS).

Red ink is the reason. NCHS, like other government agencies, has been constrained to trim its programs to comply with new funding reductions, as the federal government endeavors to whittle down, piecemeal, the vast budget deficit.

Marriage and divorce data are vital statistics – numbers that measure (in the UN's words) "all the events which have to do with an individual's entrance into or departure from life, together with changes in civil status which may occur to him during his lifetime."

NCHS is the principal federal collector and disseminator of these statistics. Since marriages and divorces have an impact on the dynamics of a population, marriage and divorce statistics are used to project future Social Security payments, which hinge in part on how many spouses exist as potential recipients of survivors' benefits. The statistics are also used by the Dept. of Defense (to estimate the armed forces' marital characteristics as they affect personnel support, pensions, etc.); the Dept. of Health and Human Services (to anticipate families and hence demand for AFDC payments) and the Federal Reserve Board (to project demand for housing mortgages).

Nongovernment users comprise housing and other industries affected by marriage, as well as the demographic community. A summary of NCHS's most recent vital statistics appears each month in *PT* (see "Population Update," page 9).

Like most government agencies, the Hyattsville, Md.-based statistical agency, which is part of the U.S. Public Health Service, spent most of 1987 coping with budget strictures. The decisive blow came after the Oct. 19 stock market crash, when the executive-legislative budget summit decreed (among many budget cuts designed to bolster national and world confidence) a further 4-percent reduction ($2.5 million) in NCHS's Fiscal Year 1988 budget.

To absorb this reduction, NCHS has allotted only $180,000 to collect marriage and divorce data during FY 1988. About $540,000 a year is normally needed to contract the states to provide NCHS with complete marriage and divorce data.

The $180,000 would allow data collection during the first four months of 1988, allowing the agency to complete its state data through the end of calendar year 1987. If the budget situation has not improved by April 1988, NCHS officials will have to make a final decision as to whether the program itself can be continued (which would cost an additional $360,000).

One alternative might be to try to persuade another institutional user of marriage and divorce statistics, such as the Social Security Administration, to take over data collection.

Given sufficient funding, NCHS would prefer to keep all of its statistics programs going. Without this option, it has chosen to sacrifice marriage and divorce rather than other collection and survey programs it operates.

Marriage and divorce statistics have been compiled under the aegis of the Public Health Service for the past 30 years, and attempts to gather consistent national marriage and divorce data go back to the beginning of the century. To halt data collection would leave a gap in the U.S. statistical record. Filling the gap at a later date might be possible, but not easy.

Why do state marriage and divorce data cost half a million dollars? These data are routinely filed at the local level and compiled by health departments in each state. The sticking point, however, lies in getting the data *from* the states to the federal level.

Unless motivated by outside funding, the quality control states maintain over their marriage and divorce data is not sufficient for compiling uniform national statistics. NCHS must contract with (and pay) the states on a calendar-year basis to provide detailed data

Continued on page 8

SURVEY REPORT

Senegal

Senegal, situated on the west coast of Africa, has a history of high fertility and high infant mortality. Preliminary results of the 1986 Demographic and Health Survey (DHS), administered by the Institute for Resource Development, Columbia, Md., indicate a slight decline in the birth rate and reveal a high prevalence of child health problems associated with poor sanitation and nutrition.

Senegal's 7.1 million people (1987 estimate) are unevenly distributed throughout that country's dry, flat landscape. Some 40 percent of the population is urban, and about one-half of these urban residents live in the capital, Dakar. Heavy rural-to-urban migration has been encouraged by the high population growth rate – 2.8 percent annually – and a poor standard of living in the countryside. With about 70 percent of the labor force dependent on agriculture, a drought-related drop in the yields of groundnuts and other cash crops contributed to the rural exodus and to growing unemployment in the capital.

The 1986 survey of family planning and child health collected information from 4,415 women 15 to 49 years of age, and measured the height and weight of their children between 6 and 36 months. The findings suggest that fertility may have fallen slightly since 1978. The Senegal DHS recorded a total fertility rate (TFR) of 6.5 average births per woman during the 1981 to 1986 period, down from a TFR of 7.1 in the 1978 Senegal World Fertility Survey (WFS). The DHS also found that women at the end of their childbearing – age 45 to 49 in 1986 – had borne 7.4 children on average, further evidence of a slight decline in births among the younger women.

UN photo 153469/John Isaac

Senegalese woman and child.

Senegalese women marry young. The average age at first marriage is only 16.1, according to the 1986 DHS, and family planning within marriage is not widely accepted. In 1986, 11.7 percent of the currently married women 15 to 49 used some form of birth control, but only 2.7 percent used a modern method. While this is a large increase over the 3.9 percent rate of contraceptive use recorded in the 1978 WFS, almost three-quarters of the gain was due to a higher reported use of abstinence and withdrawal. In fact, 29 percent of the married women had relied on abstinence some time in the past, while only 6 percent had ever used a modern method. Current use of the pill and the IUD increased fourfold between 1978 and 1986, but the 1986 level is still too low to have much effect on fertility rates.

The knowledge of various contraceptive methods did increase significantly between 1978 and 1986. For example, only 18 percent of the married women said they were familiar with the pill in 1978, while 51 percent knew about it in 1986. In general, knowledge of modern contraceptives grew from 20 to 68 percent of married women, while knowledge of traditional methods increased from 50 to 90 percent, between 1978 and 1986.

When asked why they did not use contraceptives, 34 percent of the women said they were trying to become pregnant, and 19 percent said religious proscriptions against birth control discouraged them from using contraceptives.

The preliminary DHS report also showed that 43 percent of the children under age 5 had vaccination cards, according to their mothers, although interviewers were able to verify the existence of cards for only 23 percent of the children. Up to 77 percent of the children under age 5 living in the Dakar region had vaccination cards (46 percent verified by interviewers), in marked contrast to the rest of the country.

– M.K.

DEMOGRAPHER'S PAGE

The Working Poor

by William O'Hare

To judge by news reports and speeches by some officials, the prevailing sentiment today concerning U.S. poverty is that people who work are not poor and most poor people live in poverty because they don't or won't work.

This image of the U.S. poor is vastly different from the predominant view just two decades ago, when the federal government's War on Poverty conveyed the picture of working men and women, primarily in Appalachia and the South, who simply did not earn enough to lift their families out of poverty.

However the media image of poverty may have changed, the same conditions still prevail for many of the U.S. poor. In point of fact:

- The poverty population was 32.4 million in 1986.*
- Over 10 million of these were "working poor" – that is, people in the labor force who were either working or looking for work in 1986 yet failed to earn enough to lift themselves or their family above the government's poverty threshold (see Table 1). Throughout the 1980s there have been almost as many poor adults (age 15 and over) who were in the labor force as there were poor adults who didn't work or look for work.
- The great majority of these working poor worked during most of the year. Only 11.7 percent were unemployed more than 27 weeks during 1986.
- Nearly 3 million of the working poor group worked full-time all year yet remained poor.
- Between 1976 and 1986, the number of working poor has grown by 35 percent.
- Although the welfare mother may be the media "symbol" of poverty, in fact welfare mothers number less than 4 million – about one-fifth of poor adults.

Economic Changes

In part, the composition of the poor reflects the deterioration of the national economy, a deterioration that culminated in the recession of 1981-1982. Although the economic recovery since then has reduced the unemployment rate by nearly 30 percent, it has done very little to reduce the number of working poor. The unemployment rate fell from 9.6 percent in 1983 to 7 percent in 1986, the total poverty population decreased from 35.3 to 32.4 million, and the number of poor who worked or looked for work dropped from 11.3 to 10.1 million during the same period. In other words, while the unemployment rate was dropping by 27 percent, the number of working poor fell by about 11 percent and the total number of poor declined by 8 percent.

This kind of labor market deterioration for those at the low end of the occupational spectrum is a key component in the neo-progressive explanation put forth by analysts such as William J. Wilson for the continued high levels of poverty, particularly in our inner cities. The deterioration of the labor market for unskilled workers, however, is a point which has been missing from conservative analyses of poverty and public policy such as Charles Murray's 1984 book, *Losing Ground*.

Table 1. The Working Poor: 1966 to 1986

(figures in 1000s)

Year	(1) Poor who worked during the year	(2) Poor who were unable to find work	(3) Working poor (col. 1 + col. 2)	(4) Poor not working or not looking for work	(5) Total working age* poor
1986	8,864	1,203	10,067	11,285	21,352
1985	9,112	1,255	10,367	11,587	21,954
1984	9,104	1,426	10,530	11,716	22,246
1983	9,440	1,849	11,289	12,176	23,465
1982	9,119	1,880	10,999	11,813	22,812
1981	8,631	1,167	8,798	11,462	21,260
1980	7,792	833	8,625	10,892	19,517
1979	6,545	438	6,983	9,924	16,907
1978	6,599	482	7,081	9,833	16,914
1977	6,459	553	7,012	9,872	16,864
1976	6,555	605	7,160	9,834	16,994
1975	6,697	563	7,260	10,040	17,300
1974	6,376	412	6,788	9,344	16,132
1973	6,186	266	6,452	8,976	15,428
1972	6,329	326	6,655	9,738	16,393
1971	6,836	347	7,183	10,014	17,197
1970	6,716	252	6,968	10,013	16,981
1969	6,469	177	6,646	9,642	16,288
1968	7,146	162	7,308	9,365	16,673
1967	7,929	188	8,117	10,286	18,403
1966	8,085	215	8,300	10,194	18,494

Sources: U.S. Bureau of the Census, Current Population Reports, Series P-60, selected numbers

*those age 14 and older through 1978 and age 15 and older from 1979 to 1986

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*The poverty index was created by the U.S. government in 1964 and is updated each year to adjust for inflation. In 1986, a family of four with an income below $11,203 was considered poor.

William O'Hare is Director of Policy
Studies at PRB

Unemployment

The number of poor with long spells of unemployment has risen substantially since 1978 and the number of working poor with very short spells of unemployment has fallen slightly (by 9 percent). The number of working poor with more than 27 weeks of unemployment increased by 153.8 percent, from 464,000 in 1978 to 1,178,000 in 1986; the number with unemployment of 15 to 26 weeks increased by 88 percent. The number with short periods of unemployment (1-4 weeks) declined by 9 percent.

What about the "nonworking" poor – those who do not work or look for work and are therefore not part of the labor force? The most common reasons for not working are: being ill or disabled, being retired, and keeping house. Census Bureau surveys of poor adults have shown, however, that being unable to find work has become a much more prominent reason over the past two decades (see Table 2).

Table 2. Reasons Given by the Poor for Not Working, 1966-1986

Reasons for not working	Figures in 000s*				Change 1978-1986	
	1966	1978	1984	1986	No.	Percent
Ill or disabled	2,027	2,334	2,737	2,671	337	14.4
Keeping house	4,692	3,571	4,128	3,849	278	7.8
Going to school	1,645	2,147	2,280	2,079	−68	−3.2
Unable to find work	215	482	1,426	1,203	721	149.6
Retired**	1,763	1,247	2,081	2,216	969	77.7
Other		498	463	438	−60	−12.0

Sources: U.S. Bureau of the Census, Current Population Reports, Series P-60, Nos. 95, 124, 149 and 157.

* those age 14 and older through 1978 and age 15 and older from 1979 to 1986
** Includes retired and other in 1966

Why the Increase?

A number of factors have contributed to the plight of the working poor. For example, structural changes in the U.S. economy related to a changing global economy have reduced the number of well-paid secure jobs for unskilled workers.

Increased automation of manufacturing processes has lowered the proportion of the labor force in high-paying industrial jobs, and many companies have moved labor-intensive production operations overseas where labor is cheaper.

The Demographic Factor

The surge of new workers entering the job market in recent years is a demographic factor further exacerbating the situation. This surge has been due to two major trends: The baby boom generation that was born in the late 1940s and 1950s produced a record number of new labor market entrants in the 1970s and early 1980s; a major rise in the labor force participation of women, particularly women with children, has further crowded the pool of potential workers. A large number of the working poor are marginal workers who can only find temporary or part-time positions.

Public policy has also played a role in worsening the situation of the working poor. The taxes paid by the poor have increased in recent years because the increase in the tax threshold has not kept pace with inflation or the increase in the poverty threshold.

> 10 million U.S. poor are "working poor": people either working or looking for work

In 1976, the point at which people had to start paying federal income tax on their earnings was 19 percent above the poverty threshold, but in 1986 the income tax threshold was 17 percent *below* the poverty level. This means that 10 years ago a poor family could earn as much as 20 percent more than the poverty threshold without having to pay federal income tax. In 1986, by contrast, many people had to pay taxes on earnings that did not even raise their income to poverty level.

Also the minimum wage has lost more than a quarter of its purchasing power since it was increased to $3.35 an hour in 1982. A person working in a minimum wage job is in a far different economic position than a person working in a unionized blue-collar job. In 1984, a person working 40 hours a week 52 weeks a year at minimum wage earned only 62 percent of the poverty threshold for a family of four ($11,203).

Government curtailment of job training programs, educational assistance, and public service employment, also eliminated possible solutions to the employment problems faced by many.

What Can Be Done?

A number of proposals and policy changes have been put forward to provide the unemployed and the marginally employed with job opportunities that will enhance the probability that

Continued on next page

Demographers Page

Continued from preceding page

recent tax reform legislation will eliminate federal income tax on the poor but not state or local income taxes.

2. Increase the Earned Income Tax Credit in order to help low-income workers keep more of their earnings.
3. Provide free or subsidized medical insurance to low-income workers.
4. Raise the minimum wage.
5. Increase and extend unemployment coverage.
6. Expand programs which allow welfare benefits to be used to subsidize wages in private sector jobs.
7. Halt the decline in educational assistance and job training programs.

Unfortunately, most of these measures would require increased federal expenditures (or lost revenues), an unlikely prospect in a time of budget austerity. Like many issues, this issue may have to wait until more of a national consensus evolves concerning the desirability or necessity of assisting this group of over 10 million Americans. ☐

Data Not Vital?

Continued from page 4

(e.g., the married or divorced persons' age or number of prior marriages), conduct follow-ups, and provide NCHS with copies of the data tapes and records.

Forty-two states are currently contracted to provide detailed marriage data; 31 provide detailed divorce data. (The remainder of the states still provide summary data.)

"It's a reasonable concern for agencies to periodically rethink their priorities," said Katherine Wallman, Executive Director of the Council of Professional Associations on Federal Statistics, commenting on the proposed new budget cut. "It's unfortunate when a budget crisis causes the cutting of a program before careful examination can be made. Unfortunately, [NCHS] has been forced to make a decision before their evaluation is complete. . ."

Theodore D. Woolsey, a former NCHS director, considers it "a great disappointment for the United States to cease 20 years of marriage and divorce data collection, when every other country in the Western world collects it."

—A.H.

Correction

In the table accompanying the article "Projecting a World of 10.4 Billion" (*PT*, January 1988), an editing error caused Bangladesh and Vietnam to be omitted from the World Bank's latest population projections for 2100. (As a result, also-rans Japan and Tanzania appeared in the projection table.)

A corrected version of the table appears below.

Projected Population of the 15 Most Populous Countries (in Millions) in 1985 and 2100

1985 ranked by pop. size		2100 ranked by pop. size*		
1. China	1,040	1. China	1,683	(2000)
2. India	765	2. India	1,678	(2010)
3. USSR	277	3. Nigeria	529	(2035)
4. U.S.A.	239	4. Pakistan	395	(2035)
5. Indonesia	162	5. USSR	385	(2020)
6. Brazil	136	6. Indonesia	363	(2010)
7. Japan	121	7. Bangladesh	295	(2025)
8. Bangladesh	101	8. Brazil	292	(2010)
9. Nigeria	100	9. U.S.A.	279	(2020)
10. Pakistan	96	10. Ethiopia	204	(2040)
11. Mexico	79	11. Mexico	197	(2010)
12. Vietnam	62	12. Vietnam	167	(2015)
13. W.Germany	61	13. Iran	157	(2020)
14. Italy	57	14. Philippines	137	(2015)
15. U.K.	56	15. Egypt	132	(2020)

Source: *World Populations 1987-88: Short- and Long-Term Estimates by Age and Sex with Related Demographic Statistics*, World Bank (forthcoming).

*Year that country achieves replacement level fertility is given in parenthesis.

Who's Having Babies?

One out of every 10 U.S. babies was born to a foreign-born mother in 1986—representing 7.4 percent of all U.S. women age 18 to 44—according to a newly released Census Bureau report. Based on the June 1986 Current Population Survey of 57,000 households, the study found that foreign-born women had much higher fertility than native-born women. About one in 10 foreign-born women age 18 to 44 had given birth within a year of the survey, compared to only one out of 15 native-born women.

This survey is the first of the annual fertility reports to include birth rates and lifetime birth expectations for foreign-born women and presents comparative data collected in the June 1983 CPS but not previously published. The 1986 CPS also tabulated the age at first marriage, number of children ever born, the birth dates of the first- and last-born children, and birth expectations for foreign-born and native-born U.S. women of reproductive age.

Among foreign-born women, Mexican immigrants had the highest fertility, followed by women from other Latin American countries, Asian-born women, and, finally, European-born women. Mexican-born women accounted for 31 percent of all the births to foreign-born mothers in 1986. Their birth rate was 142 births per 1,000 Mexican-born women age 18 to 44.

By contrast, there were only 54 births per 1,000 European-born women, lower than the rate for native-born women, 68 per 1,000. The rate for women born in Asia was 105 per 1,000.

One of the most interesting questions the Census Bureau survey asks concerns birth expectations data, sometimes used to forecast future fertility. Women aged 18 to 34 are asked how many children they expect to have in their lifetime. Since 1979, the average number of births women expect has been 2.0 or 2.1 children, although the total fertility rate, a synthetic measure of lifetime fertility based on current birth rates, has been lower (1.8 children) for that entire period. Foreign-born women expect to have slightly larger families, with 2.3 children considered likely.

The reliability of birth expectations

data in predicting future fertility is affected not only by how serious respondents are about realizing their expectations and by unexpected marital disruptions, but also by the limitation that the data cannot include women who are uncertain about future birth expectations or who fail to respond to the question.

In 1986, 15 percent of the survey sample were uncertain about future childbearing, and another 11 percent failed to respond. Young women, who will be responsible for most of the future U.S. births, are least likely to state the actual number of births they expect to have.

The percentage of women in their 30s who have never had children has increased by about 50 percent since 1976. By 1986, 24 percent of women 30 to 34 years old and 17 percent of women 35 to 39 years old had never borne a child. Analysts think that childlessness will remain high for this group, and that, contrary to the women's earlier expectations, many will reach the end of their childbearing years without having had a child.

Other highlights of the report include:

- About 50 percent of new mothers were back in the labor force within a year after giving birth – up from 38 percent in 1980 and 31 percent in 1976.
- New mothers were more likely to be working if they were over age 30 and had a college education.
- Women aged 30 to 34 were the only group showing an increase in fertility since 1985 – from 70 to 79 per 1,000.
- Overall, Hispanic women had significantly higher fertility rates (106 per 1,000) than blacks (78 per 1,000) or whites (68 per 1,000).
- About 12 percent of all 1986 births were to Hispanic mothers (both foreign- and native-born) although they constituted only 8 percent of all women 18 to 44 years old.
- About half of recent black mothers were unmarried compared with 23 percent of Hispanic and 12 percent of white mothers.

– *M.K.*

Copies of the report, *Fertility of American Women, June 1986*, Series P-20, available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

SOFTWHERE

These days Lotus 1-2-3 is far from alone in the personal computer spreadsheet market. Imposing new programs like Quattro and Excel have joined a crowded field that already includes Silk, VP-Planner, and Twin. It's now possible to buy a spreadsheet program that performs much like Lotus for $150 $100 $75.

Even cheaper is As Easy As, one of several spreadsheets distributed through "shareware" channels such as computer bulletin boards.

As Easy As 3.0 offers powerful statistical functions and a 256 × 1,024 cell matrix, as well as Lotus-like capabilities of graphics and data sorting. Its interface is attractive, macros are easier to create than 1-2-3's, and the program can share data and many (though not all) formulas with Lotus. Most engaging of all is As Easy As's promptness (15 seconds) in booting up the program from a single floppy disk.

Shareware sometimes comes with a few rough edges, and As Easy As seems less than happy with huge (over 100 kilobyte) data files. But for personal statistics analysis and life tables, it offers a lot of number crunching for a $30.00 registration fee. For IBM PCs and compatibles. Contact: Trius, 15 Atkinson St., Lynn, Mass. 01905.

– *A.H.*

POPULATION UPDATE

Estimated United States Population:

As of October 1, 1987	244,425,000
As of October 1, 1986	242,222,000

The above estimates, the latest available, include armed forces overseas and are from U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1014.

Estimated World Population:

As of February 1988	5,084,000,000
Annual growth	87,000,000

Estimated by extrapolation from the mid-1987 population on PRB's *World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: September 1987

	12 months ending with September					
	Number		Rate			
Item	1987	1986	1987	1986	1985	1984
Live births	3,788,000	3,741,000	15.6	15.6	15.8	15.5
Deaths	2,113,000	2,097,000	8.7	8.7	8.8	8.6
Natural increase	1,675,000	1,644,000	6.9	6.9	7.0	6.9
Marriages	2,415,000	2,390,000	10.0	9.9	10.2	10.5
Divorces	1,161,000	1,161,000	4.8	4.8	5.0	4.9
Infant deaths	- 37,800	39,200	10.0	10.5	10.5	10.7
Population base (in millions)			242.7	240.4	237.8	235.6

Note. Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source. Monthly Vital Statistics Report (Vol. 36, No. 9) from the National Center for Health Statistics.

Mapping China's Population

The just-released *Population Atlas of China*, compiled and edited by China's Census Office and published by Oxford University Press (New York, N.Y., phone 1-201-796-8000), fully deserves the oft-used description "awesome."

A volume imposing enough to constitute a coffee table, not simply lie on one, the 15 × 21 inch, 10-pound atlas includes 137 huge, demographically keyed maps in spectacular color, plus 32 pages of detailed statistical tables for provinces, counties, cities, and county administrative units.

Data are derived from the 1982 Third National Census. The high demographic resolution of the maps (down to the county level in many cases) and their broad range of subject matter (distribution, ethnicity, sex and age structure, education, and employment) is all the more remarkable considering how little was known of China's demography even at the beginning of this decade.

Demographers will be particularly intrigued by the population distribution maps. Not content with merely presenting 1982 data, the *Atlas* offers distribution dot-maps going back to the Western Han Dynasty (A.D. 2). Population pyramids by single years for each province adorn another map. Another, yet more unusual dot-map shows the distribution of population age 100 and over!

An introductory essay provides background on China's demography and socioeconomic situation. The effects of the natural environment upon population distribution are discussed, along with the history of agricultural development. As a final touch, a clear plastic overlay is included with the Atlas, imprinted with city and county locations to enable the peruser to find these places on the Atlas's colorful but complicated maps.

This sumptuously prepared demographic feast (price: $199.95) is likely to become a fixture on the shelves of many libraries and of students of China's population.

–*C.H.*

TAKE A NUMBER

America On the Move Again: The old saw that "one in five Americans moves every year" seems to be true once again. The Census Bureau's Current Population Survey reported that, between March 1984 and March 1985, a record 46.5 million Americans changed their residence. This reverses a long term decline in the trend. From March 1983 to 1984, 17.3 percent of Americans moved, but that proportion jumped to 20.2 in 1984-1985. Most of this increase was due to shorter-distance moves (same county), possibly signifying delayed moves due to higher mortgage interest rates in the earlier part of the decade. The West region was the biggest gainer in 1984-1985, with a net gain of 260,000 as a result of internal migration, while the Midwest and Northeast lost a net of 211,000 and 209,000, respectively. The South recorded a net gain of 160,000, but this survey result was not statistically significant.

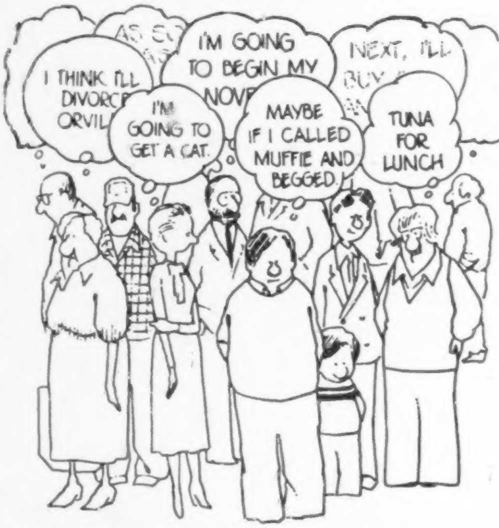
How Did They Do That? A new Census Bureau publication describes how the Bureau selects topics for inclusion in the decennial census and how the questions are tested well in advance. The counting of America every 10 years (the 1990 Census is only 14 months away) is designed to meet a multiplicity of national and state needs, both in content and publications. Now you can read all about it. For a copy of "The Content Development Process for the 1990 Census of Population and Housing," call (301) 763-1516.

Here and There . . . The etymological root of the statistical terms we use every day may be something we don't often think about, but . . . did you know that "statistics" comes from a form of "state secrets," from the Greek *statistik*, "political numbers" having to do with affairs of state, especially the potential size of one's (or one's enemy's) army? . . . "fertility" is rooted in the Latin *ferre*, "to bear" . . . "infant" is also from Latin, *infans*, "incapable of speech" . . . Latin also gave us "projection" from *proicere*, "to throw forward" . . . "number" shares its heritage with "nimble" which is variously rooted in the Old English *numol*, "holding much" and the Latin *numerus*, "number," perhaps suggesting that those using statistics were suspected of being a bit too quick or nimble right from the start . . . And we heard this on drive-time radio just the other day: "You can't trust projections, especially when they're for the future."

–*C.H.*

ADDENDA

From *The World According to Carp* by Richard Guindon – Permission, King Features


I THINK I'LL DIVORCE ORVIL
AS EC
I'M GOING TO GET A CAT.
I'M GOING TO BEGIN MY NOV
MAYBE IF I CALLED MUFFIE AND BEGGED.
NEXT, I'LL BUY
TUNA FOR LUNCH

It's exhausting to think about it, but there are millions of people, and each of us has a plan every day.

CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in Current Readings. Publishers may address review copies to Book Review Editor, POPULATION TODAY, Population Reference Bureau, 777 14th St., N.W., Washington, D.C. 20005.

GAINING PEOPLE, LOSING GROUND: A Blueprint for Stabilizing World Population,

by Werner Fornos. Washington, D.C.: Population Institute, 1987. 121 pages. $10.95 cloth; $4.95 paper. ISBN 0-9619165-1-6.

This short book is a well-written plea for the United States to "rejoin the international partnership it once led" in tackling the world's "population crisis" penned by one of the most tireless advocates of political action to deal with that crisis.

Population Institute President Werner Fornos asserts that the Third World's commitment in the 1980s to taming population growth, and its progress in doing so, can be credited to U.S.-led external aid and counsel during the 1960s and 1970s.

Now that very progress, Fornos writes, is threatened by the U.S. policy reversal announced at the 1984 Mexico City International Population Conference and its subsequent cutoff of contributions to the UNFPA and IPPF and reductions in population aid.

Fornos provides a useful, if unreferenced, overview of the pressures created by rapid population growth in the some 100 developing countries lodged in a "holding pattern" in the middle stage of the demographic transition, with still-high birth rates and lowered death rates. For a closer look, he singles out 20 nations, from Bangladesh to Zaire, which account for 69 percent of current world population growth.

He cites Population Institute estimates that it would cost $33 billion from 1988 to 1998 to supply family planning services to the more than 400 million Third World people which research suggests want such services but who lack access or money to secure them. Such an expenditure, he projects, would reduce fertility rates rapidly enough to hold global population to just over 7 billion in 2030 – 3.2 billion less than the total shown by current projections. To achieve this would require $1 billion of new funds annually starting in 1990, mostly from the international donor community, with the U.S. share set at about $600 million.

Fornos's proposal would also require a sharp stepup in recent U.S. population aid. (Population aid is allocated $197.9 million in the omnibus continuing resolution budget for Fiscal Year 1988 passed by Congress in December.) He admits that money and the U.S. alone can't solve the problem of rapid world population growth. But he argues that the U.S. has a responsibility to rejoin the battle to help avert the ravages that Third World overpopulation and poverty will cause if action is delayed.

Fornos says little that most *PT* readers would find new. But his book is a generally useful, nontechnical summary of the challenge and feasible solutions and deserves attention.

– Jean van der Tak

ASIA-PACIFIC REPORT 1987-88,

edited by Charles E. Morrison. Hawaii: East-West Center, 1987. 84 pages. $10.95. ISBN 0-86638-098-1.

Last year's edition of this regional status report (see *PT*, April 1986) proved a good reference for policymakers and students needing a reliable synopsis or general overview. This year it's even better.

The first section covers the political and economic activities of this region of 2.7 billion people – a timely focus on mid-1980s changes in the area's diverse military and civilian governments; the course of international relationships ranging from trade conflicts between Japan and the U.S. to armed conflicts in Afghanistan and Kampuchea; and an overview of economic growth patterns.

The second section concentrates on marine policies and the development of the Pacific Ocean nations. This year's issues include the policing of maritime borders, pollution, and fisheries depletion; and the unique development problems presented by the island nations' small size, geographical dispersion, and often limited land-based resources.

Maps are clean and crisp and should blow up easily for overhead projection in the classroom. Sidebars, tables, and figures are liberally used to supplement the text.

– Denise Dowdell

Books Received

ENVIRONMENTAL SCIENCE: A Framework for Decision Making (2nd ed.), by Daniel D. Chiras. Menlo Park, Calif.: Benjamin/Cummings, 1988. 521 pages. $37.95.

FAMILY DEMOGRAPHY: Methods and their Application, edited by John Bongaarts et al. New York, Oxford University Press, 1987. 365 pages. $72.00.

HANDBOOK OF NATIONAL POPULATION CENSUSES: Africa and Asia, by Eliane M. Domschke and Doreen S. Doyer. Westport, Conn.: Greenwood Press, 1986. 1,032 pages. $125.00.

INTERNATIONAL DIRECTORY OF DEVELOPMENT JOURNALISTS, compiled by United Nations. New York: UN Dept. of Public Information, Div. of Economic and Social Information, 1987. 1,273 pages. $25.00.

INTERNATIONAL WHO'S WHO 1987-88 (51st ed.), by Europa Publications Ltd. London: Europa, (dist. in North America by Gale Research, Detroit, Mich.), 1987. 1,653 pages. $165.00.

SPOTLIGHT

KUWAIT

Population (1987 est.): 1.9 million
Land area: 6,880 sq. mi.
Births per 1,000 pop.: 34
Deaths per 1,000 pop.: 3
Rate of natural increase: 3.2
Total fertility rate: 4.4
Infant mortality rate: 19
Life expectancy at birth: 72
GNP per capita: $14,270
Capital: Kuwait City

by Wendy Patriquin

Kuwait, whose name means "little fortress," is situated at the upper end of the Persian Gulf, bordered by Iraq to the north and west and by Saudi Arabia to the south.

The tiny oil kingdom, smaller than Massachusetts, has several unusual population characteristics, including its vast number of resident foreign workers. Funds for economic development have long been more readily available than the indigenous labor force necessary to achieve it. Consequently, an influx of labor from outside began in the 1950s.

Today native Kuwaitis constitute a minority (42.6 percent) within their own country. The majority of the foreigners are Arabs from neighboring states; other worker groups include Iranians, Indians, and Pakistanis.

The population of Kuwait was only about 50,000 early in the 20th century, when the economy primarily involved fishing. It grew thereafter, and during the last three decades has soared by 950 percent, mostly as a result of migration. In 1957, Kuwait's population stood at 200,000. In 1987, it reached 1.9 million.

Another consequence of migration is that Kuwait's total population has a sex ratio of 132 males per 100 females. This unusual proportion occurs because although the native Kuwaiti population age-sex pyramid has a normal "Mexican hat" silhouette typical of expanding populations, the non-Kuwaiti population structure has a high concentration of males in the working ages.

Another population anomaly: Kuwait has the lowest national crude death rate in the world, 3 deaths per 1,000 population. This remarkable figure is the result of a fertile, young population typical of a less developed nation benefiting from sudden, large-scale health expenditures over the past two decades. Free comprehensive health care was established in 1962; the present 72-year life expectancy at birth is typical of prosperous more developed countries.

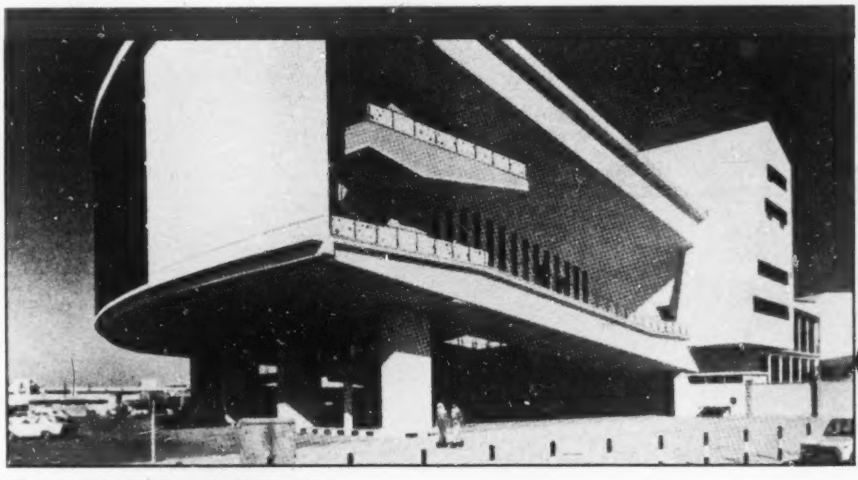
By contrast, Kuwait's fertility is atypically high for a prosperous country – especially one with a GNP per capita higher than the U.S.'s. But when compared to other countries in Western Asia, Kuwait's total fertility rate (TFR) of 4.4 children per woman can be considered moderate.

Whatever pricing problems the oil-producing countries presently face, the huge revenues the national government has derived from petroleum have enabled it to establish a highly developed welfare system, with free education and no personal income taxes. Literacy currently stands at 71 percent, one of the highest in the Arab world.

The government has stated that its population policy is based on the identification of the most suitable population size that will meet the requirements of an expanding economy. The population size and the rate of natural increase are now considered to be too slow. While no family planning programs are known to exist, contraceptive supplies are available commercially.

A large immigrant population can be a source of problems. Kuwait's constitutional monarchy has expressed a desire to reduce the future number of foreign workers and their families. Present population policy calls for maintaining a significant level of immigration as necessary to relieve manpower shortages, but with stricter controls. In order to relieve overcrowding in Kuwait City and nearby areas, where the great majority of the population live, existing urban centers are being enlarged and new ones are under construction.

Despite a small population and land size, Kuwait's strategic location, coupled with vast oil wealth, makes it an important participant in world affairs. Its smallness also makes its close proximity to the Iran-Iraq war a cause for particular national nervousness.



The campus of Kuwait University

POPULATION TODAY

Vol. 16, No. 3 March 1988

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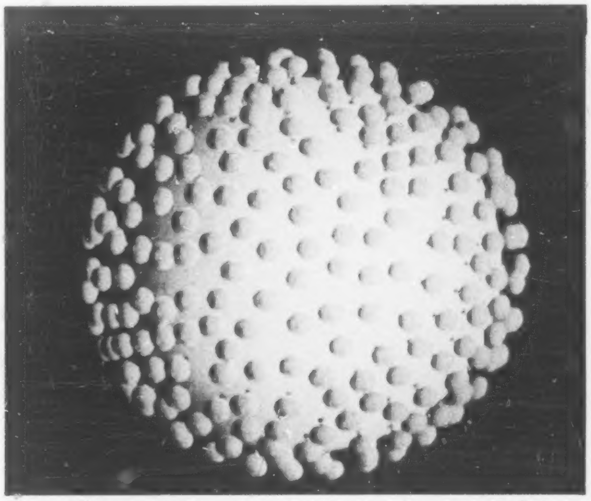

National Institutes of Health

Computer model image of a Human Immunodeficiency Virus. (See page 3.)

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FROM THE EDITOR'S DESK

It's not a front-page issue, but in the last few years some commentators have expressed a concern about world demographic trends: that the more developed countries (MDCs) might suffer a loss of geostrategic parity vis à vis the less developed countries (LDCs) because of the MDCs' meager, slowly growing population numbers.

Even if the MDCs (1987 population: 1.2 billion) promptly adopt pronatalist policies, however, they still face an uphill demographic battle.

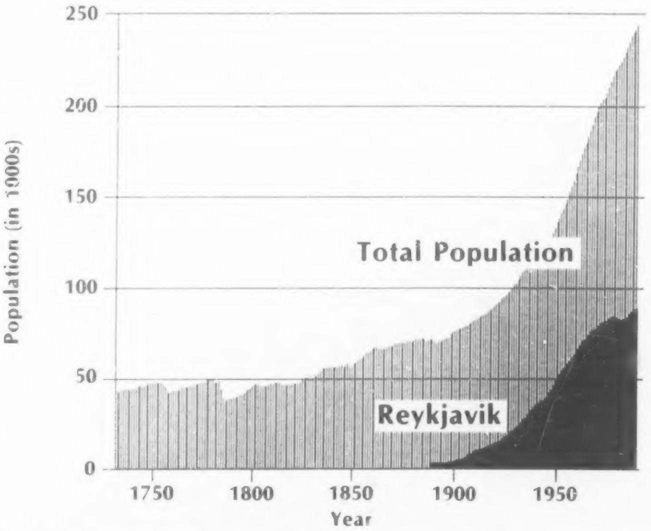
The reason: the LDC demographic "bench" has too much depth. Not only because of the LDCs' large total (1987 population: 3.8 billion) but because during the next few decades, successively larger cohorts of LDC women will reach the reproductive ages of 15-49 years. In 1985, not only was 68 percent of world population LDC, but the LDC regions contained 81 percent of the world's females less than 15 years old. It's these LDC females' fertility that will decide future MDC-LDC ratios.

Besides, if LDC leaders themselves ever embrace the idea of hegemony through natural increase, they might start worrying about any slippage in *their* share of geostrategic parity. But then, thanks to their countries' caches of young cohorts, all these leaders would have to do is slightly advance the spark on their national pronatalist incentives, and – voilà – a population gap more to their liking. You didn't really think the MDCs were going to steal a fertility march on the LDCs, did you?

– Art Haupt

SPEAKING GRAPHICALLY

Icelandic History on the Line



Iceland is a classic (and well recorded) example of a country making the transition from preindustrial high fertility to the low fertility of modern times. During the 17th and 18th centuries, though, it suffered heavily from the predations of pirates, epidemics, volcanic eruptions, and economic depression. Despite high fertility (estimated at about 5 children per woman in the 1850s), the demographic results of these disasters can be seen in the slightly sawtoothed graph above showing total population between 1734 and 1987.

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Conducting the AIDS Survey

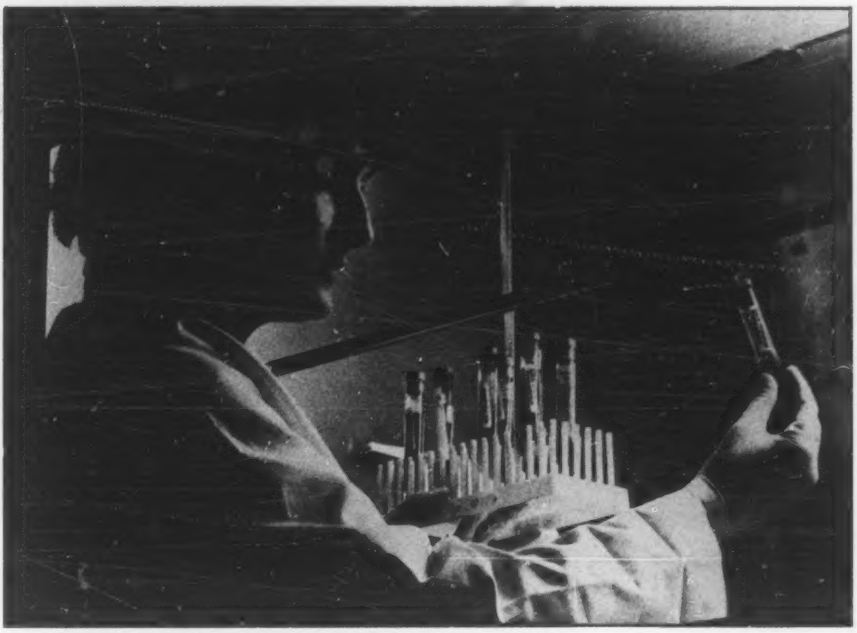
AIDS (Acquired Immune Deficiency Syndrome) has "the greatest fatality rate – 93 percent – that I've ever come across in human history" (U.S. Surgeon General Everett Koop). But after seven years, and with 52,975 U.S. cases as of Feb. 15, 1988, the statistical extent of this devastating epidemic is still a largely unknown quantity.

Active AIDS cases are only the tip of the iceberg; a much larger number of people – perhaps more than a million, no one knows – are estimated to be infected with the Human Immunodeficiency Virus (HIV) that causes AIDS, though this "hidden" AIDS population shows no AIDS symptoms and again, no one knows what proportion will ultimately develop the disease. Little is known period about the statistics of AIDS prevalence, but without these data, health providers will be hard-pressed to determine how AIDS moves through the population and how to concentrate resources to fight it.

To gather these crucial data, President Reagan in June 1987 directed the Dept. of Health and Human Services "to carry out a comprehensive program to determine the nationwide incidence of [AIDS] and to predict its future occurrence and to initiate epidemiologic studies to determine the extent to which HIV has penetrated the various segments of our society."

The survey is to be conducted starting in July 1989 by the National Center for Health Statistics (NCHS), which is organizationally under the Centers for Disease Control in the U.S. Public Health Service. The NCHS survey will canvass a large (50,000) sample of the entire U.S. population. It will include completing a questionnaire and taking blood samples.

The idea of such a survey has already proven controversial, and commentators have envisioned it in terms of a stranger on the doorstep greeting the householder with: "Hello, I'm from the U.S. Government and I've got this needle . . ." But NCHS officials are aware of the potential problems of a survey on such a sensitive subject and are devising plans to encourage response.


National Institutes of Health

Surveying the U.S. populations for AIDS will be a challenge.

Solid Numbers Needed

The crucial statistical parameters of AIDS remain shrouded in mystery; specifically, the *numerators* compared with their corresponding *denominators*. If these related numbers were known with some certainty, the all-important rates of incidence and prevalence would rapidly become clear, but so far they remain unknown.

One numerator/denominator pair is the rate of HIV-infected cases as a proportion of the population at risk. To date, no one has a good handle on either of these figures. But if they were both known with some precision – broken down by sex, age, location, ethnic group, and sexual orientation – it would then be possible to ascertain how contagious the virus actually is.

Another numerator/denominator pair is simply the number of people with active cases as a proportion of the HIV-infected population. While the active AIDS patient population is known, the symptomless HIV-infected population, while largely unknown to itself and to researchers, is assuredly many times the size of the active AIDS population. At a Public Health Service AIDS conference in 1986, health and medical specialists used rough and ready estimates of the at-risk populations and their rate of infection to make a very approximate estimate of the U.S.'s HIV-infected population, which they pegged at between 1 million to 1.5 million.

Still another unknown: the proportion of HIV-infected people who will ultimately develop active AIDS cases over time. Whether the development is 20-30 percent, as some researchers think, or ultimately 100 percent, a view held by others, projecting the ultimate course of AIDS in the U.S. population would be much easier if we had an estimate of the rate of incidence.

Data Are Scarce

If solid numbers were established for these variables, treatment and prevention programs could be targeted most efficiently on the groups most at risk. Further, we would finally have a statistical understanding of the broad outlines of the AIDS threat and its projected future – an understanding that is now lacking.

The present body of knowledge about AIDS incidence and prevalence

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AIDS

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in the U.S. remains sketchy. In a recent review, NCHS summarized the data from surveys taken thus far as follows:

- Prevalence in homosexual and bisexual men in 50 surveys ranges from less than 10 percent to as high as 70 percent, with most findings falling in the 20-50 percent range.
- Heterosexuals who have HIV-infected sexual partners contract the disease at a rate ranging from 10 percent to 60 percent.
- Applicants for military service continue to average about 0.15 percent HIV-positive, though whether this two-year trend is a result of a leveling off or of self-selection is hard to say.
- Red Cross blood donors not previously tested average 0.043 percent HIV-positive.
- Cohort studies of homosexual males conducted by the National Institutes of Health show a dramatic decline in incidence rates of HIV infection, from 10-20 percent incidence in 1983 to 1-2 percent or less in 1986. These results, and recent drops in some sexual-disease incidence, may indicate a change in sexually active persons' sexual behavior.
- Estimates of progression of the disease vary. The mean interval from infection with HIV to the onset of AIDS apparently exceeds seven years.

Resistance to Tests

How to sift the national population for AIDS has become a potent public health and political issue. At this time, all military service applicants and immigrants are tested by the federal government, and three states require testing of couples applying for marriage licenses. Some politicians have called for mandatory testing of U.S. residents, though such a policy would probably raise civil rights questions.

Those on the other side of the debate have argued that compulsory testing of everyone might result in pointless testing of vast numbers of people in low-risk groups, while driving underground the high-risk population for AIDS (mostly homosexuals and intravenous drug users and their partners).

While the parallel is sometimes drawn between AIDS and more typical public health threats such as traditional sexually transmitted diseases, AIDS differs from them in that the disease results in death (unlike some STDs, it cannot be cured with a shot of penicillin) and is perceived by homosexuals to have been accorded a special social stigma by society at large (so that, according to this view, the information would be more likely to be used to discriminate against them than used for their benefit).

It is against this background that the launching of an AIDS survey, and how to conduct it, is set.

Planning an AIDS Survey

Pursuant to President Reagan's directive, the nationwide household HIV survey is now being planned by NCHS. The survey is slated to begin in July 1989 and will be a random sample, household-based survey, covering 50,000 persons over the succeeding six to nine months. It will be entirely conducted by a private contractor yet to be chosen. Results will be released in early to mid-1990.

How to conduct such a sensitive survey? It seems likely that respondents will first be approached via letter, urging them to participate and stressing both the Public Health Service's authority to carry out such a survey and the legally mandated confidentiality of survey data. A follow-up phone call may or may not ensue prior to the arrival of the one or two interviewers, who will assuredly include a phlebotomist qualified to draw blood. The survey will consist of a questionnaire and a blood sample. One adult 18-54 years old per household will be surveyed. The entire survey should be completed in 10 minutes.

Needless to say, the success of the survey will depend on the cooperation of the respondents, who after all will be volunteers. Establishing rapport with community groups will be part of the process, and pilot studies in selected areas will test the most fruitful methods for achieving this. A national survey of the public's AIDS attitudes conducted by NCHS in August 1987 showed that 69 percent of respondents said they would cooperate with an AIDS survey.

Significant nonresponse would raise the possibility that high-risk survey subjects were deselecting themselves from the survey. (For Census Bureau surveys, response rates customarily range above 90 percent.) To preclude this, the survey may oversample people geographically or demographically who were likely to be in high-risk subgroups. Steps will also be taken to involve representatives of those subgroups in the planning and implementation of the survey, in order to assure trust and maximum participation.

One pilot study will test confidential versus anonymous surveying. In a confidential survey, the respondent's identity would be known but his/her confidentiality assured by the interviewer; in an anonymous survey, the respondent would remain anonymous with no identifying link between the respondent and his/her test result.

NCHS would prefer to conduct a confidential survey, as experience has suggested that the difference between *confidential* and *anonymous* is hazy to much of the public, and individuals either do trust the process or do not.

The Center "has had very good responses based on confidentiality," according to Peter Hurley, Associate Director of NCHS's Office of Vital and Health Statistics Systems, which is preparing the AIDS survey. After a pilot study and two pretests, NCHS would recommend to the White House's Domestic Policy Council whether or not to proceed with the actual 1989 survey.

From a statistical standpoint, the advantage of a confidential survey over an anonymous one is that the results of a confidential interview can be validated with a re-interview (a common revalidation method for Census Bureau surveys, which also sometimes ask for information that might be considered sensitive).

(One organizational disadvantage of confidentiality is that NCHS would be obligated to provide counseling ser-

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SURVEY REPORT

Colombia

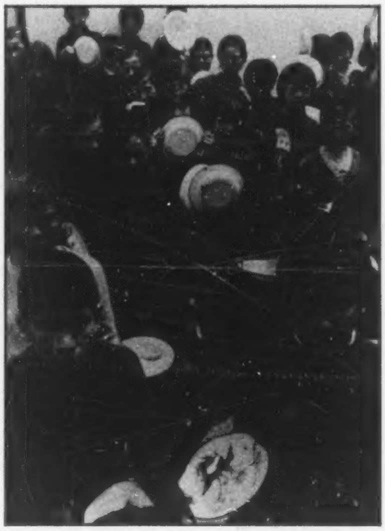
Preliminary results from the 1986 Colombian Demographic and Health Survey (DHS) confirm a continued decline in fertility over the last decade. This finding is based on a sample of 4,480 household interviews and 5,329 individual interviews of women aged 15 to 49 years.

The preliminary report implies that the total fertility rate (TFR), or the average lifetime number of children per woman, fell by 1.4 during the last 10 years, from 4.8, as estimated in the 1976 Colombian Fertility Survey, to 3.4 in 1986. This is half the 1969 TFR measured in Colombia's first national fertility survey.

Use of contraception increased 2 percentage points per year between 1976-1986, rising from 43 percent to 63 percent of currently married women. This is less impressive than the 1969-1976 period when the annual increase was nearly 3 percentage points per year. However, a slowdown was anticipated as the pool of women not using contraception diminishes.

Current use of contraception varied by age: 58 percent of women under 30 and 67 percent women over 30 used contraception. Differentials also occurred relative to parity: 57 percent of women with 0-2 children, 75 percent of women with 3-4 children and 61 percent of women with 5 or more children employed some method. Residence is also a factor: 53 percent of rural and 68 percent of urban women used contraception.

The 1986 survey implies that female sterilization may have replaced the pill as the preferred method among Colombian women. Of the 63 percent of all women surveyed currently using some method, 18 percent employed sterilization, 17 percent the pill, and 10 percent the IUD.



Inter American Development Bank

Schoolchildren in Cobagote, Colombia.

The pill is most popular among young women of low parity in the central region of the country. The IUD was most prevalent among urban women with a higher level of education. On the other hand, sterilization was employed more often by women with no education (26 percent) than women with secondary-plus education (14 percent).

Regarding reproductive intentions, 70 percent of married women interviewed wanted no more children. The unmet need for contraception is represented by 31 percent of women who indicated a desire for no more children yet were not using any method, a decline from the 50 percent unmet need in 1976. Women with an unmet need for family planning tended to be younger, have less education, and live in the rural Atlantic zone, according to the DHS.

While the above results are preliminary (final results are coming in Spring 1988), they point toward continued change in contraceptive use in the context of a sustained fertility decline across all age groups of women.

– Catherine M. Marquette

Robert J. Lapham (1929-1988)

Robert J. Lapham, a leading specialist on population and international family planning issues, died February 20 after a long illness. He was 58 years old.

At the time of his illness, Lapham was head of the Demographic and Health Surveys program at the Westinghouse Institute for Resource Development in Columbia, Md. He had played a key role in the design and implementation of that project, which is conducting surveys in 35 developing countries, one of which (Colombia) is reported on this page.

Lapham was an active member of the Population Association of America, which he served as Secretary-Treasurer from 1984-87 and as a Board member at the time of his death. A memorial fund in his name is being established by PAA to promote applied demography.

His many other contributions to the field of demography include his pathbreaking collaborative work with Parker Mauldin on the mutually reinforcing contributions of family planning program efforts and socioeconomic setting to fertility declines in developing countries.

His career included service as study director for the Committee on Population and Demography for the National Academy of Sciences and 10 years with the Population Council in Tunisia and New York. He was also involved in community service with the Boy Scouts of America and had done relief work in the Middle East for Palestinian refugees over a seven year period with his spouse Virginia.

He was a graduate of the University of Michigan, where he earned B.A., M.A. and PhD degrees, the latter in sociology with emphasis on population. He was a member and generous contributor to the Population Reference Bureau.

– T.M.

DEMOGRAPHER'S PAGE

The Demography of Islam

by Nazy Roudi

The world's Moslems number some 942 million people – about one-fifth of the global population – living in nearly every country. Principally because of high fertility among its adherents, Islam is the fastest growing religion in the world.

Moslems form the majority of populations in 40 nations. Of all the continents, Asia has the highest number of Moslems, totaling over 627 million; Africa has the highest proportion – more than 42 percent. On a regional basis, more than 90 percent of the populations in Southwest Asia and North Africa are Moslem. The populations of Europe, the Americas, and Oceania are 1.8, 0.3, and 0.2 percent Moslem, respectively.

Twenty-eight countries have populations that are more than 90 percent Moslem. The country with the largest single Moslem population? Indonesia, with 140 million out of 175 million.

Across the World

Moslem populations generally have high rates of population growth and fertility. Total fertility rates (TFR) range from a low of 3.3 total children per woman, on average, for Albania (still the highest in Europe), to over 8 in North Yemen. Within populations, fertility differential by religion is more pronounced. Many studies show that Moslems generally have larger families than other religious groups in the same national population.

Moslems form about 23 percent of the less developed world, and 68 percent of them live in rural areas.

Moslems have long disagreed about which of Mohammed's successors is the legitimate leader of the faithful and about aspects of theological interpretation and practice. This has resulted in the division of Moslems into different *mazhab*, or branches.

The overwhelming majority of Moslems are *Sunnis*. There are four schools of jurisprudence in Sunni: *Hanafi, Maliki, Shafe'i, Hanbali*. Another group of Moslems are Shi'as, whose schools are *Zaydi, Imami*, and *Ismaili*. Imami Shi'as are the overwhelmingly dominant sect in Iran. Iraq, where shi'as are about 60 percent of the population, has a Sunni-controlled government. There are two other mazhabs, *Kharijite* and *Zahiri*, to which a small portion of Moslems belong.

Moslems around the world have much in common, but they are not as homogeneous as some may think. As Islam spread from its original home in the Arabian Peninsula in the seventh century, it encompassed people with different languages, cultures, and religions. While Europe lapsed into the Dark Ages, the Islamic empire grew until at its height it stretched from Cordoba and Casablanca in the west to Samarkand and Kabul in the east.

The Mongols brought Islam with them to India, where its influence reached a peak in the 16th century. Between the 17th and 19th centuries, merchants extended Islam to Southeast Asia, principally to the lands that are now Malaysia, Indonesia, and the Philippines. While Islam was sweeping through Asia, it also was spreading through Africa via Moslem traders.

Some converts became "Arab." Most, however, maintained their identities so that today Moslems speak dozens of languages and exhibit many cultures through the 300 or so ethnic groups to which they belong.

Family Planning in Islam

The word Islam means "submission" (to the will of God). Moslems believe that those who make this submission to obey God's laws will live an eternal and enjoyable life in paradise.

Each school of Islam places different emphasis on the different sources of Islamic law – although the Koran always has primacy. In contrast with the Bible, the Koran gives no reference to contraception. But there are large numbers of hadith on contraception, mainly coitus interruptus.

Coitus interruptus was the most common contraceptive method known to man through history before the invention of modern methods. Many Islamic jurists have sanctioned other methods of contraception than coitus interruptus, stipulating that the methods not be harmful or affect the person's future fecundity. Arguments in traditional Jewish and Christian teaching that contraception is an immoral practice never gained ground in Islam.

In *Sex and Society in Islam* (1983), Musallam writes:

> Apart from Ibn Hazam, I have searched in vain for opposition to the basic permission of contraception among writings of Moslem jurists of all the historical Sunni and Shi'a schools of law spanning the period from the birth of Islam to the nineteenth century. Agreement on the sanction of contraception has been so general that we can say the permissive view became a cultural cliché.

Or, in the words of the final report of the first international conference on Islam and Family Planning, held in Rabat, Morocco, in December 1971:

> Family planning is for the spouses [alone to decide] by mutual agreement and without compulsion, to use safe and lawful means to delay or precipitate pregnancy in such a way as to suit their health, social, and economic circumstances, within the framework of responsibility toward their children and themselves.

On abortion, unlike the consensus on the permissability of contraception, important disagreements remain.

All Moslem jurists believe that the fetus becomes a human being after the fourth month of pregnancy (120 days).

Nazy Roudi is a demographer at PRB

The World's Moslem Population by Country

	Pop. 1987 (000s)	% Moslem	Moslem Population (000s)
World	5,026,313	18.7	941,527
Africa	601,351	42.2	253,816
N. Africa	134,769	91.2	122,960
Algeria	23,461	99.0	23,226
Egypt	51,930	91.1	47,308
Libya	3,835	98.0	3,758
Morocco	24,362	99.0	24,118
Sudan	23,525	72.0	16,938
Tunisia	7,562	99.4	7,517
W. Sahara	94	100.0	94
W. Africa	187,367	46.3	86,829
Benin	4,339	16.0	694
Burkina Faso	7,310	44.0	3,216
Cote d'Ivoire	10,767	25.0	2,692
Gambia	760	87.0	661
Ghana	13,949	15.1	2,106
Guinea	6,380	69.3	4,421
Guinea-Bissau	925	38.0	352
Liberia	2,384	21.0	501
Mali	8,423	80.0	6,738
Mauritania	2,007	99.0	1,987
Niger	6,989	87.4	6,108
Nigeria	108,620	45.0	48,879
Senegal	7,064	91.0	6,428
Sierra Leone	3,868	39.5	1,528
Togo	3,229	16.0	517
E. Africa	179,102	21.4	38,314
Burundi	4,999	1.0	50
Comoros	415	99.5	413
Djibouti	312	90.0	281
Ethiopia	45,997	35.1	16,145
Kenya	22,378	6.0	1,343
Madagascar	10,605	2.0	212
Malawi	7,438	16.0	1,190
Mauritius	1,080	17.0	184
Mayotte	64	98.0	63
Mozambique	14,724	13.0	1,914
Reunion	550	2.4	13
Rwanda	6,811	8.6	586
Somalia	7,742	99.0	7,665
Tanzania	23,503	30.0	7,051
Uganda	15,909	6.6	1,050
Zambia	7,135	1.0	71
Zimbabwe	9,372	0.9	84
Middle Africa	61,074	8.7	5,301
Cameroon	10,255	22.0	2,256
Cen. Afr. Rep.	2,700	8.0	216
Chad	4,646	51.0	2,369
Equat. Guinea	340	0.7	2
Gabon	1,195	1.0	12
Zaire	31,796	1.4	445
S. Africa	39,039	1.1	412
South Africa	34,313	1.2	412
Asia	2,930,116	21.4	627,755
Asia less China	1,868,116	32.8	612,249
S.W. Asia	121,399	92.6	112,365
Bahrain	437	99.3	434
Cyprus	681	18.5	126
Gaza	560	98.0	549
Iraq	16,971	96.0	16,292
Israel	4,378	12.5	547
Jordan	3,731	93.0	3,470
Kuwait	1,866	96.0	1,791
Lebanon	3,321	60.0	1,993
Oman	1,331	99.0	1,318
Qatar	316	95.0	300
Saudi Arabia	14,789	99.0	14,641
Syria	11,307	87.0	9,837
Turkey	51,390	99.2	50,979
United Arab Em.	1,437	90.0	1,293
Yemen, N.	6,533	99.0	6,468
Yemen, S.	2,351	99.0	2,327
Middle S. Asia	1,112,409	30.9	343,382
Afghanistan	14,184	99.0	14,042
Bangladesh	107,088	82.9	88,776
Bhutan	1,476	5.0	74
India	800,326	10.9	87,236
Iran	50,408	98.0	49,400
Maldives	196	100.0	196
Nepal	17,814	5.0	891
Pakistan	104,601	97.0	101,463
Sri Lanka	16,316	8.0	1,305
S.E. Asia	420,980	37.1	156,185
Brunei	249	64.0	159
Burma	38,822	3.6	1,398
Indonesia	174,882	80.0	139,906
Kampuchea	6,536	2.4	157
Malaysia	16,069	49.0	7,874
Philippines	61,525	5.6	3,445
Singapore	2,616	18.3	479
Thailand	53,646	4.0	2,146
Vietnam	62,177	1.0	622
E. Asia	1,275,328	1.2	15,822
China	1,062,000	1.5	15,505
Hong Kong	5,601	0.5	28
Mongolia	2,011	9.5	191
Taiwan	19,575	0.5	98
Americas	690,256	0.3	1,924
N. America	269,746	0.6	1,618
Canada	25,868	0.6	155
United States	243,760	0.6	1,463
Latin America	420,510	0.1	307
Middle America	108,968	0.1	102
Panama	2,274	4.5	102
Caribbean	32,191	0.3	81
Trinidad & Tobago	1,251	6.5	81
Tropical S. Amer.	232,375	0.1	123
Guyana	766	9.0	69
Suriname	386	14.0	54
Temperate S. Amer.	46,976	–	–
Europe	495,313	1.8	8,841
N. Europe	83,506	1.0	796
United Kingdom	56,838	1.4	796
W. Europe	155,654	0.4	625
Belgium	9,873	0.7	69
France	55,637	1.0	556
E. Europe	112,551	1.1	1,261
Bulgaria	8,961	11.0	986
Romania	22,942	1.2	275
S. Europe	143,602	4.3	6,159
Albania	3,086	70.0	2,160
Greece	9,988	2.5	250
Yugoslavia	23,431	16.0	3,749
USSR	284,008	17.3	49,133
Oceania	25,268	0.2	58
Fiji	729	8.0	58

Note. This table includes all regions, and a total of 100 countries with populations containing 0.5 percent or more Moslems.
Source. Population Reference Bureau, Inc., and Richard V. Weekes, *Muslim Peoples: A World Ethnographic Survey.*

As a result, they prohibit abortion after that stage.

Hanafi jurists permit abortion until the end of the fourth month, but not without a specific reason, such as breastfeeding a child. Most Maliki jurists absolutely prohibit abortion. A small minority of the Malikis permit abortion of the young embryo of 40 days or less. Many Shafe'i and Hanbali jurists allow abortion, some putting an upper limit of 40 days after conception for a legal abortion, others 80 days or 120 days.

Abortion is permitted only in life-threatening medical situations in Afghanistan, Bangladesh, Iran, Indonesia, Iraq, Lebanon, Pakistan, Saudi Arabia, Syria, Yemen, Libya, Mali, Mauritania, and Senegal. A few countries such as Egypt, Albania, Kuwait, and Morocco authorize abortion on broader medical grounds. Turkey and Tunisia permit abortions on request but with an upper limit on the age of the fetus.

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Demographer's Page

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If contraception is so clearly allowed under Islam, why is the rate of contraceptive use so low among Moslem populations?

A recent study of contraceptive attitudes in Bangladesh, conducted by the Program for the Introduction of Appropriate Contraceptive Technology, has shown that 99 percent of Bangladeshi women know of at least one efficient method of contraception, although only 40 percent of couples are willing to accept family planning.

More Children, Greater Security

The women were asked to give their views on why family planning was not widely accepted. The overwhelming majority of participants in the study mentioned "religious objection to contraception." (Husband's objection was another reason given.)

This seeming contradiction between Islamic teaching and Moslem's actual practice can be reconciled by taking into account the intermediate variable: the status of women in Islam. The subordinate position of women is the major obstacle in the success of family planning programs.

The rights that Islam originally granted to women included: forbidding the custom of female infanticide, limiting the number of wives to four, and giving women some rights of inheritance. These rights for women, which in the seventh century represented a major improvement, are not necessarily sufficient for Moslem women in the 20th century. Lack of education for women remains widespread in the Moslem world and is certainly a factor in high fertility of many Moslem populations.

In Islam a man can divorce his wife any time and for any reason he wishes to, as long as a witness is present. The wife does not have to be present or even be informed. The ease with which a wife can be divorced places her in a position of considerable insecurity. The greater the number of sons, the more secure her family position and future.

The reflection of the double moral standards inherent in a patriarchal

Continued on next page

LETTER TO THE EDITOR

I am writing in response to your column questioning the value of the remarriage rate ("From the Editor's Desk," *Population Today*, November 1987).

I agree that a single remarriage rate, which combined both widowed and divorced men and women, would be difficult to interpret. However, remarriage rates that are specific for sex and previous marital status are very informative and show interesting divergences from the crude marriage rate.

The National Center for Health Statistics (NCHS) has published remarriage rates for divorced and widowed men and women since 1963. From these rates it can be seen that the likelihood of remarriage has been consistently higher for men than women, but that the differential is narrowing. Specifically, men's remarriage rates after divorce were 66 percent higher than women's in 1965, 62 percent higher in 1975, and 49 percent higher in 1985.

Next, from these rates it can be seen that the rates of remarriage for both men and women turned definitely and persistently downward after the early 1970s. Specifically, the rate of previously divorced men fell 47 percent from 230.7 remarriages per 1,000 previously divorced men in 1971 to 121.6 in 1985. The rate for previously divorced women fell 38 percent from 132.8 remarriages per 1,000 previously divorced women in 1971 to 81.8 in 1985.

From these rates, we also know that divorced men are 2½ times more likely to marry than single men. In 1985 the rate for divorced men, 121.6, was more than twice as high as the 50.1 rate of marriage for single men. For women, differentials by marital status showed the same relationship but the marriage rate for divorced women, 81.8, was only one-third higher than the 61.5 rate for single women.

When remarriage rates are further controlled for age, the rates show other complex trends that are discussed in the *Advance Report of Final Marriage Statistics* published annually by NCHS. I would be happy to send the rates or our publications to your readers. Surely the remarriages by sex and age are of great relevance during a historical period when so many Americans divorce and remarry.

Barbara Foley Wilson
Statistician
Marriage and Divorce Statistics Branch
NCHS
3700 East-West Highway
Hyattsville, Md. 20782

POSITIONS/ PROFESSIONALS

Research Associate, Population Studies and Training Center, Brown University, beginning September 1988. The position has a minimum duration of two years, and is renewable contingent on availability of funds. Applicants should have a PhD in one of the social sciences and provide evidence of a strong commitment to demographic research. Occasional opportunities to teach a graduate seminar may also be available. Send curriculum vitae, statement of research interests and capabilities, and three letters of recommendation to: Prof. Thomas Espenshade, Chair of Search, Population Studies and Training Center, Box 1916, Brown University, Providence, R.I. 02912. Applications received before April 4, 1988, will be given first consideration, but the position will remain open until filled. Brown University is an Affirmative Action/Equal Opportunity Employer and encourages applications from members of protected groups.

Demographer's Page

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class society can be seen in the customs of veiling, seclusion, and segregation of the sexes. Women are not permitted to be judges. In Islamic courts the testimony of two female witnesses is equal to the testimony of one male witness. A daughter inherits half of what a son inherits. But the sharia obliges a son to support his mother and unmarried sisters in illness and old age.

Islam allows girls and boys to marry as early as 9 and 15 years of age, respectively. Although they rarely marry that young any longer, Moslem women still marry relatively early. Average age at first marriage for Bangladesh women was 16.7 years in 1981.

The extent to which Moslems are ruled by Islamic law is different in different countries. In some countries, such as the USSR, all the Islamic laws are ignored. In some countries some are ignored, e.g., polygamy is illegal in Turkey and Tunisia. Many countries outlaw early teenage marriage. In others, such as Saudi Arabia and Iran, Islamic law is the law of the land.

Just the same, a number of Moslem countries have active national family planning programs. Examples of their prevalence rates include: Egypt 30 percent (1984), Indonesia 38 percent (1985), Lebanon 53 percent (1983), Morocco 26 percent (1983-84), Pakistan 9 percent (1984-85), Tunisia 41 percent (1983). Whether other, rapidly growing Moslem countries will feel the need to increase family planning activities remains to be seen. ☐

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SOFTWHERE

World is a stand-alone database program that provides basic national data for nearly all countries of the world.

World runs on an IBM PC or compatible and is completely menu driven. The opening menu lets you choose country names and capitals, check country spelling (particularly useful), geography (limited in description to world regions), sovereignty, and vital statistics. The vital statistics menu has two choices: vital statistics and population. The vital data include life expectancies by sex, birth, death, infant death, and fertility rates. The population menu selection displays the official country name, population, rank, total area, and density. The detail is sufficient to show that Pitcairn island actually has a capital, Adamstown, a total island population, 66, and ranks 255th in the world.

This program is useful for elementary grades on up. For a quick reference or as a supplement to a map or globe, World can't be beat. However, for rigorously current data it would be wise to consult other sources.

World is available from Lone Star Software, a shareware distributor, for $6.00 (specify World Disk #668). Contact Lone Star Software Inc., 2100 Hwy 360, Suite 1204, Grand Prairie, Tex. 75050.

—D.L.

POPULATION UPDATE

Estimated United States Population:

As of November 1, 1987	244,612,000
As of November 1, 1986	242,406,000

The above estimates include armed forces overseas and are from U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1015.

Estimated World Population:

As of March 1988	5,091,000,000
Annual growth	87,000,000

Estimated by extrapolation from the mid-1987 population on PRB's *World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: November 1987

	12 months ending with November					
	Number		Rate			
Item	1987	1986	1987	1986	1985	1984
Live births	3,812,000	3,739,000	15.7	15.5	15.8	15.6
Deaths	2,121,000	2,102,000	8.7	8.7	8.8	8.6
Natural increase	1,691,000	1,637,000	7.0	6.8	7.0	7.0
Marriages	2,407,000	2,387,000	9.9	9.9	10.2	10.5
Divorces	1,159,000	1,158,000	4.8	4.8	5.0	4.9
Infant deaths	37,800	39,000	9.9	10.5	10.5	10.6
Population base (in millions)			243.1	240.8	238.1	235.9

Note. Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source. Monthly Vital Statistics Report (Vol. 36, No. 11) from the National Center for Health Statistics.

AIDS

Continued from page 4

vice to those who tested HIV-positive. For better or worse, this responsibility would be moot in an anonymous survey.)

High Risk vs. Low Risk

Yet another numerator/denominator mystery is the size of the population at high risk of contracting the HIV virus, versus the size of the low-risk U.S. population (i.e., the remainder of the population). HIV prevalence is certainly very different between the high-risk and low-risk groups. How different is impossible to tell until a survey can determine their respective sizes.

These groups are hard to measure for many reasons. As for quantifying the homosexual and bisexual population, little progress has been made since the Kinsey report of the 1940s, whose survey of sexual behavior is still quoted in the 1980s for lack of any more recent statistics.

One possible approach might be to give respondents a global list of risk behaviors and ask them whether they fall into *any* of the categories, rather than compel them to reveal specific behaviors.

Undoubtedly, any kind of AIDS survey will be hard to conduct. But as one researcher puts it: "If you could get a population for the high-risk group, a population for low-risk, and HIV prevalence rates for each, then you'd really have something."

– A.H.

Frey named Visiting Scholar

William H. Frey has been named PRB's Andrew W. Mellon Foundation Visiting Scholar for the fall term of the 1988-1989 academic year, beginning September 1988.

Dr. Frey, Mellon Research Scientist and Research Associate at the Population Studies Center at the University of Michigan, is co-author of the forthcoming 1980 Census Monograph volume on regional and metropolitan growth in the United States. His work at PRB will focus on the political and economic implications of recent and projected changes in the racial/ethnic composition of the nation's largest cities.

TAKE A NUMBER

A Boom at the Polls: The baby boomers continue to swell the ranks of the U.S. voting age population, according to the latest Census Bureau projections. About 183 million Americans will be of voting age by November 1988, 8 million more than during the 1984 elections. About 11 percent will be black and 7 percent Hispanic, says the report. But if past trends are any indication, only about half of those eligible will actually show up at the polls on Election Day to exercise their civic right. Voter participation since 1930 peaked with the 1960 (Kennedy-Nixon) presidential election in which 62.8 percent cast a vote. That came down to 53.1 percent during the 1984 landslide reelection of Ronald Reagan (but only 33 percent of the voters cast a vote for U.S. Representative that year).

And, After 1990. . .: The U.S. decennial census's *raison d'etre* is, of course, the allocation of seats in the House of Representatives. Based on likely trends in state population growth or decline, the following good and bad news can be anticipated: projections run by PRB's William O'Hare indicate that the "Sunbelt" states of the South and West will take 15 seats from their "Rustbelt" counterparts, with California and Florida garnering an extra 6 and 4 seats, respectively. New York's projected loss of 3 seats leads the losers, while Ohio, Pennsylvania, and Illinois would drop 2 each. Some states stand to lose a large percentage of their Congressional delegations. West Virginia would lose 1 of its 4 representatives and Montana, with only 2 at present, would see its number cut in half. Ouch!

Interestingly, O'Hare's projections indicate that an adjustment for minority undercounts in the census, hotly debated at present, would make little difference in House apportionment. Adjusting the black undercount for as much as 5 percent, for example, would cause only Georgia to pick up an additional seat – a gain of 2 seats rather than 1, with that seat taken from California's unadjusted gain of 6. But California would still wind up with 50 seats and could probably tolerate the loss.

– C.H.

ADDENDA

TM
BABY BOOMER
CLASSICS

Talkin' 'bout my generation A new record label includes such nostalgic anthologies as "Rockin' Sixties," "British Sixties," "Mellow Sixties," "Soul Sixties," and (inevitably) "Surfin' Sixties." A mere 19 years from now, Baby Boomer Classics can unload its unsold LPs with a slight title change: "Rockin' Music for Those in Their Sixties," etc.

CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in Current Readings. Publishers may address review copies to Book Review Editor, POPULATION TODAY, Population Reference Bureau, 777 14th St., N.W., Washington, D.C. 20005.

CHINA'S CHANGING POPULATION, by Judith Banister. Stanford, Calif.: Stanford University Press, 1987. 488 pages, $49.50. ISBN 0-8047-1155-0.

Before the 1980s, the information flow about the world's largest national population was a trickle. With the 1982 Census and a series of subsequent surveys, that trickle turned into a flood of data. The statistical outpouring came during China's one-child family planning push and the data have been at the heart of recent controversy about China's population policy. *China's Changing Population* provides a detailed and perplexing interpretation of demographic trends since the founding of the People's Republic in 1949.

The volume's 10 chapters review major population themes: health, morbidity, and mortality; internal migration and population distribution (though nothing on urbanization, for which data remain scarce); and marriage, fertility, and family planning. There is also an extended assessment of the quality of data, which are considered good to excellent depending on the variable in question. The study is rich in data (nearly 80 tables), and documentation (71 pages of notes and references) and ends with a prospective overview.

The study's main focus is the decline of fertility from nearly 6 births per woman in the 1950s to just over 2 in the 1980s, and the family planning policy that brought it about. The author goes to considerable length to document the coercive features of the one-child policy, including compulsory sterilizations and abortions. Her assessment of it is strongly critical and extends even to western demographers who gloss over the coercion.

Future demographic implications of the one-child program are compared to what might occur in the absence of reproductive compulsion, with the suggestion that the latter would not be inconsistent with a better life for future generations of Chinese. At the same time, the reader is left pondering a more basic question about what "voluntarism" really means in a society in which the relation between the state and individuals is so different from our own.

– Thomas W. Merrick

Family Demography: Methods and their Applications, edited by John Bongaarts, Thomas Burch, and Kenneth Wachter. International Studies in Demography, International Union for the Scientific Study of Population. New York: Clarendon Press, Oxford University Press, 1987. 365 pages. $72.00. ISBN 0-19-829501-4.

The radical changes in the composition, size, and number of U.S. families and households over the past quarter-century have fueled the growing appreciation of the importance of the family and its life cycle, as distinct from an individual's passage through life. And there has been methodological progress to aid analysis of families, households, and kinship networks. This book presents recent approaches to the problems in the field and constitutes a summary of the state of the art in family demography.

The book deals with measurement and estimation, the family life cycle, multistate life tables, kin models, and household projection, with reports from prominent researchers in America, Europe, and Japan.

Multistate life tables and projections are featured, based on viewing life events as transitions from one state to another, i.e., single to married, married to divorced, childless to parent, and so on. The multistate framework of matrix algebra and notation pioneered by Andrei Rogers is represented here by Frans Willikens with a marital-status life table; Thomas Espenshade on American female marital status, with different experiences in the black and white population, from data in the June 1980 CPS; Sandra Hofferth on children's living arrangements at various ages, from a longitudinal study on income dynamics; and John Bongaarts on a family status life table to model family characteristics and proximate determinants such as fertility, mortality, first marriage, divorce, remarriage, and children's departure from home. Bongaarts uses the computer program FAMTAB for analysis; the others use the computer program developed by Rogers and Willikens.

In his introduction, Nathan Keyfitz notes four difficulties: the many types of family groups, heterogeneity, lack of independence in inputs, and the spread of nonmarried cohabitation. Acknowledging these and other problems, Norman Ryder notes the "rich array" of alternative models to study the household, which "is for many purposes the meaningful production and consumption unit." Ryder believes "any projection of the developments of the past decade would suggest that the discipline [family demography] is not far from achieving maturity, although the complexity of the subject prohibits any expectation of imminent closure." This book gives a good picture of why he can say that.

– Roberta Yared

MALAYSIA

Population (1987 est.): 16.1 million
Land area: 127,316 sq. miles
Births per 1,000 pop.: 31
Deaths per 1,000 pop.: 7
Rate of natural increase: 2.4 percent
Total fertility rate: 3.9 children per woman
Infant mortality rate: 30 (infant deaths per 1,000 live births)
Life expectancy at birth: 67 years
GNP per capita: $2,050
Capital: Kuala Lumpur

by Wendy Patriquin

Situated in Southeast Asia, the federation of Malaysia consists of 13 states, 11 of which make up Peninsular Malaysia on the southern part of the Malay peninsula. Sabah and Sarawak – the two other provinces which contain 20 percent of the population – lie 600 miles east across the China Sea, on the north coast of the island of Borneo.

Ethnically, Malaysia can be divided into several distinct groups which have never really mingled into a single nationality. Among these groups indigenous Malays are the most numerous (about 50 percent of the population). The unique characteristics of this group are that they are Moslem, rural, and usually have a lower economic status. Chinese make up the second largest group of Malaysians, nearly one-third of the population. This group possesses considerable economic power because they are active in trade, business, and finance. About 10 percent of the population is of Indian descent. This is a highly professional group and also very active in agriculture and the service trades.

All of this diversity would lead one to believe that there is little cohesion in Malay society, yet 85 percent of the population speaks Malay, the national language. English is normally used in government and business.

During the past two decades, Malaysia has experienced remarkable economic growth. Traditional exports – tin, rubber, palm oil, and timber – grew in volume and value during the 1970s, while the petroleum sector expanded so rapidly that it now accounts for one-quarter of all exports.

Rubber has always been an important export item, although petroleum and palm oil now exceed rubber in export earnings.

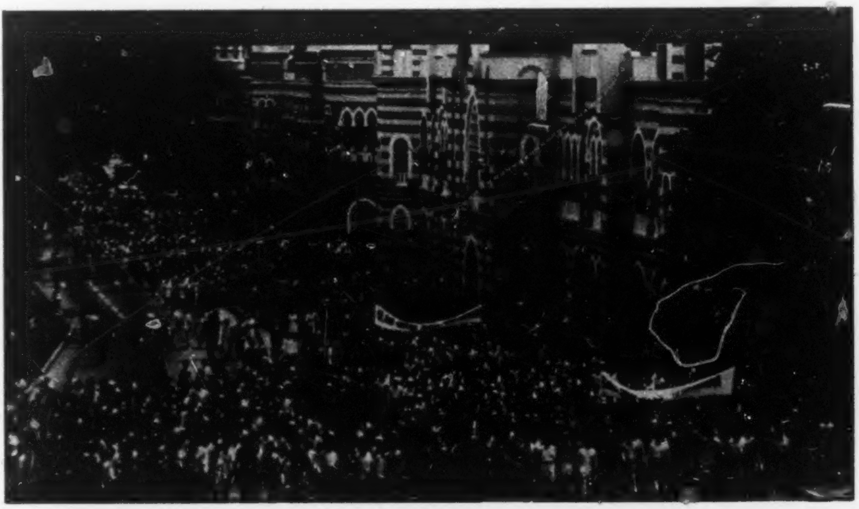
One reason for Malaysia's rapid economic growth is the government's promotion of industrialization and foreign investment. The goal of its 20-year economic plan, implemented in 1971, is to eradicate poverty and eliminate the identification of race with economic function that is so prevalent in Malaysia. The general plan is to expand equity, employment, and educational opportunities for the economically disadvantaged ethnic Malays and other indigenous groups. Eventually, it is hoped that employment will be identically structured across ethnic groups.

The 1982 contraceptive prevalence survey found 42 percent of currently married women 15-44 using contraception. Life expectancy is long and infant mortality low for a less developed country.

The Malaysian government considers the current rate of natural increase to be satisfactory. However, in 1984 it adopted an ambitious population policy to more than quadruple its population by 2100, to 70 million. It plans to do this by instituting pronatalist incentives to help retard the national growth rate's fall. In this way, it is hoped that the country would be most of the way to reaching its new population goal by the time fertility declined to replacement level.

The government's rationale for more population growth: A larger domestic population could better support industrial growth that might otherwise be stymied by "protectionist policies practiced by developed countries."

The incentives to encourage fertility include income-tax deductions and maternity benefits for women who have up to 5 children. Simultaneously, however, the government also supports a broad network of family planning services, as well as maternal and child health programs, and programs to improve education level and the status of women, all of which would be expected to encourage further decline in Malaysia's birth rates.



Embassy of Malaysia

Mohammed's birthday being celebrated in Kuala Lumpur.

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Is being Middle Class an exercise in nostalgia? (See page 3.)

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FROM THE EDITOR'S DESK

The annual task of gathering data for the *World Population Data Sheet* brings with it new and often fascinating glimpses into the more obscure corners of geography. The units listed on the Data Sheet are not always "countries," an often undefinable, even controversial term, but "geopolitical entities," a term that covers, we hope, any eventuality. Some favorite entities:

Pitcairn Island is the least populous, and may also be the only place in the world that can claim a *complete* census count – a population of 55 in 1985, with 0.0 percent overcount/undercount. Pitcairn Islanders are descended from the mutinous crew of the *Bounty* and regularly report their demographic data to the UN's Statistical Office. They also have no taxation.

The world is so immense that it contains two Christmas Islands, the most populous of which is an external territory of Australia lying in the Indian Ocean, where its 2,000 or so Chinese and Malay inhabitants are principally engaged in phosphate mining. Its capital is The Settlement, its principal port Flying Fish Cove.

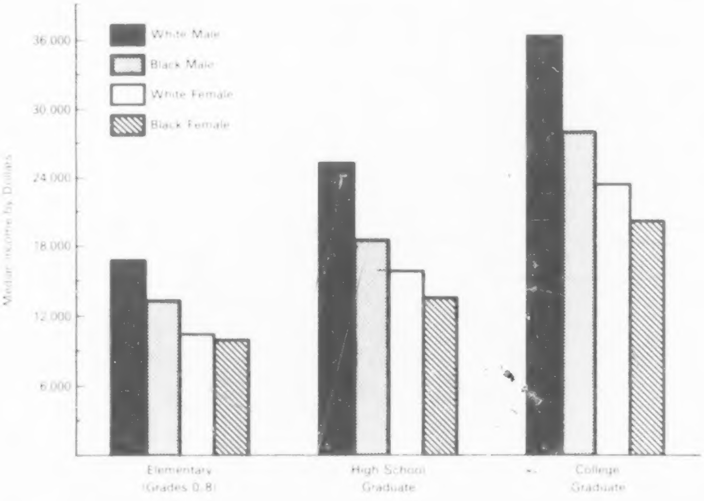
Andorra lies high in the Pyrenees Mountains of Spain. This tiny enclave's economic mainstay is tourism. The country's unpaid soldiers – all officers – supply their own weapons and uniforms to present the flag at official ceremonies. The Andorran army fought its last battle 700 years ago. Sounds like easy duty.

All of these places figure in the Data Sheet's world totals. There is no room to print their entries individually, but world population wouldn't be the same without them.

– Carl Haub

SPEAKING GRAPHICALLY

The Wage Gap: U.S. Median Income for Selected Groups of Persons 25 Years and Older



Source: U.S. Bureau of the Census

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A Species in Danger or Evolution?

Is the U.S. middle class – vanishing? Over the past half-decade, this provocative question has received wide media exposure, and conclusions have ranged sharply.

Pessimistic writers point to the relative wage stagnation that began in the early 1970s, the shift from manufacturing to services – from the union label to low paying fast-food – and the persistence of a significant poverty-stricken population.

Optimistic commentators point to the high absolute wage levels that many workers receive, and the creation of new industries, jobs, and households. They assert that many unfavorable comparisons with the American economic past are based on nostalgia or amnesia.

What *is* the middle class, anyway? It can mean what *Websters Ninth Collegiate Dictionary* calls "a heterogeneous socioeconomic grouping composed principally of business and professional people, bureaucrats, and some farmers and skilled workers sharing common social characteristics and values." Another way is to ignore social-class differences and divide up the population by income, and label as middle class a defined population who bracket the median U.S. income ($20,991 per year per employee, for all domestic industries, as of 1985).

In practice, definitions of the "middle class" are, in economist Herbert Stein's words, "so flexible, data so limited, the possibilities of statistical manipulation so great that almost any argument can be said to have empirical support."

Economic Change

It's a plausible assumption that social changes in the way people work and spend have been affected by the considerable economic changes that began in the early 1970s.

For one thing, the U.S.'s economy, like many around the world, is growing more slowly. The U.S. gross national product grew at an annual rate of about 3.1 percent from 1945 to 1973. From 1973 to 1985 it grew at an average of about 2.5 percent. The income distribution may not have changed significantly, but the pie being divided is growing more slowly.

Library of Congress

The Middle Class family, circa World War II.

The exact causes of these economic slowdowns remain in dispute, but no one disputes the major effect of OPEC's 1973 and 1979 oil price hikes. U.S. wages are also under pressure because of the often lower wages abroad, as the U.S. endeavors to compete in what is increasingly a single world economy. And other less tangible factors may have been at work, including slowing productivity during this period.

Wages for the labor force as a whole have been largely stagnant for many years. Expressed in constant dollars, weekly wages declined after 1973 (when they were $187) and have never reached that peak again (they were $168 in January 1988, expressed in constant 1977 dollars).

> Expressed in constant dollars, U.S. weekly wages declined after 1973 and have never reached that peak again

During this period the income of households and families suffered less but also felt the economic impact. In fact, they came to a virtual halt – median family income reached a peak of $29,172 (in 1985 dollars) in 1973. Since that time it has dropped by 6 percent in constant dollars, rebounded, and then dropped again during the early 1980s. In 1985 it stood at $27,735.

Some have argued that the wage stagnation is due to the economy's shift away from manufacturing to service industries. This is an issue that remains in dispute among economists, since the service sector encompasses a wide range of high- and low-income jobs, but one view is that wage stagnation has apparently had an equitably depressing effect on both manufacturing and service.

Others argue that a younger age distribution is the reason, ever since the mid-1970s when the baby boomers began to swell the labor force. But economist Lester Thurow, after adjusting for ages, has calculated that distribution of earnings is no different than without age-adjustment. And the work force, whose median age declined starting in the 1960s, is aging again.

Whatever the reason, measured in

Continued on next page

A Species in Danger?

Continued from preceding page

constant dollars, the distribution of income has sagged in the middle since 1970, as shown in Table 1. Families earning between $20,000 and $50,000 in constant dollars have shrunk by 6.7 percentage points of the total. The segment earning $50,000 or more dollars has increased by 5.3 percentage points. And the segment earning under $20,000 dollars has also increased by 1.3 percentage points.

Table 1. Distribution of U.S. Families by Income (in Constant 1985 Dollars)

	No. fams. (in thousands)	Percent distribution of families								
		Under $5,000	$5,000-9,999	$10,000-14,999	$15,000-19,999	$20,000-24,999	$25,000-34,999	$35,000-49,999	$50,000 up	Median income($)
1970	52,227	3.8	8.2	9.9	10.8	12.2	22.9	19.3	13.0	27,336
1975	56,245	3.3	8.9	10.4	11.1	11.2	21.1	20.0	13.9	27,421
1980	60,309	3.9	8.9	10.4	11.1	10.6	20.5	19.5	15.1	27,446
1981	61,019	4.3	9.1	11.3	11.0	11.1	19.6	18.9	14.6	26,481
1982	61,393	5.1	9.3	11.1	10.9	11.4	19.5	17.9	14.8	26,116
1983	62,015	5.2	9.2	10.8	11.0	10.7	19.2	18.3	15.6	26,642
1984	62,706	4.8	8.9	10.5	10.6	10.4	18.7	19.0	17.0	27,376
1985	63,558	4.8	8.5	10.2	10.5	10.3	18.6	18.8	18.3	27,735

Source: 1987 *Statistical Abstract*, Table 731, based on Current Population Survey

However, measuring income distribution another way, economists Frank Levy and Richard C. Michel, who have written extensively about the middle-class question, point out that if the population is divided into fifths according to income, the past four decades have seen each fifth continue to receive about the same proportion of national income.

Demographic Shifts

Concurrent with economic changes are social changes in the way the U.S. population lives and works.

Comparing the 1980s to benchmarks such as 1960 shows labor force participation is continually growing. From 1960 to 1985 it grew from 59.2 percent to 64.8 percent of the over-16 U.S. population. This increase, while moderate in terms of the entire population, occurred despite the steady decline in labor participation by males – from 82.4 percent to 76.3 percent. Females, meanwhile, have poured into the national work force: During 1960-1985, their participation soared from 37.1 percent to 54.5 percent. (Women earn 64 percent of men, as of 1984, for fulltime, year-round work.)

Not surprisingly, the 54 percent of husband-wife families with wives in the labor force earn considerably more – 48 percent more – than those without working wives. Only a quarter of the latter earn as much or more than the median income for families for all married-couple families: $36,431 annually. As economist Thurow says, "The pattern is rapidly shifting toward a way of life in which both husband and wife work full time."

As is well known, the size of households has steadily shrunk – from 3.67 members in 1970 to 2.66 in 1987 – due to declining fertility, divorce, and people striking out on their own. If the size of households has shrunk, their number has necessarily mushroomed. The number of households grew by 39 percent from 1970 to 1985, while the national population expanded by only 17 percent. And because of the baby boom, the number of households headed by the relatively youthful (21 to 29 years) has grown during the 1980s.

Meanwhile, either because of neglect or frustrated social policy, U.S. poverty has not showed any pattern of decline in the last two decades. From 1960 to 1969 poverty had declined from 22.4 percent to 12.1 percent of the population. In 1986 it was 13.6 percent.

Keeping the Dream Alive

Probably no tidy single link connects these disparate issues. It's not likely that economic problems inexorably shrank households, nor that the entrance of more women into the labor force necessarily caused lower fertility. (Nor is lower fertility generally considered to cause economic stagnation, though there are those who take this view.)

Economist Robert J. Samuelson argues that the creation of new, smaller households by young people represents a kind of liberation. "Would today's dissatisfied working mothers – single or otherwise – feel better if trapped in miserable marriages or bored stiff at home. Prosperity has created new choices, and if all the choices aren't perfect, they may be better than yesterday's lack of choices."

But if there is a sense of unease, in the final analysis, it could be because middle classers may be pursuing a goal that could be as much psychological as economic. Economist Levy theorizes another kind of change – a change in expectations. In 1955, the average male of 40 could anticipate a rise of 27 percent in his income during the next 10 years. And fantasize even greater opportunities for his children.

The average male of 40 now feels fortunate to keep pace with inflation. (Ignore for a moment Samuelson's argument that the average male of 30 starts out with a much higher salary than his forbears.)

In the Levy and Michel view, trends toward greater labor participation represent an "act of levitation" by households to maintain or increase their prosperity despite everything – in particular, despite relatively stagnant incomes. Concurrent trends such as increased consumer debt, later marriage, and delayed childbearing could all be interpreted as similar acts of economic levitation.

While the verdict is far from in, it's possible that the social history of the "vanishing" middle class can be explained as Americans trying to keep up prior rates of growth even though productivity and wage growth wherewithal may be lacking. Trying to keep the dream alive, if not with cash, then with credit.

– A.H.

SURVEY REPORT

Burundi

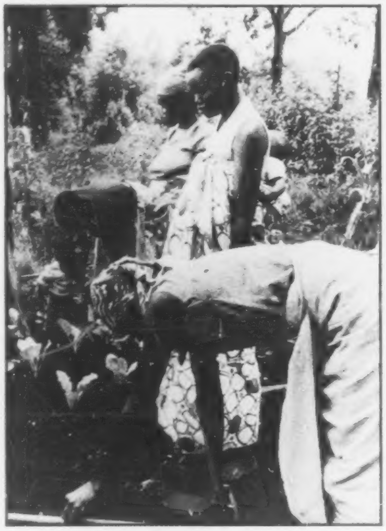
A tiny landlocked country in East-Central Africa, the Republic of Burundi has a 1988 population of 5 million, and may reach 10 million by 2010. The preliminary results of the 1987 Demographic and Health Survey of 3,970 women 15 to 49, including 547 couples in which both wife and husband were interviewed, showed little evidence that fertility will decline in the near future.

The 1987 DHS measured a total fertility rate, or average number of lifetime births, of 7.0 children per woman for 1982 to 1987. Women age 45 to 49, at the end of their reproductive period, had borne an average of 7.3 children during their lives, indicating that fertility has been stable for several decades.

The women surveyed said they wanted to have about 5.6 children – considerably fewer than current rates. The husbands gave similar responses, preferring 5.5 children, on average.

Among married women, 24 percent did not want to have any more children, and 53 percent wanted to delay the next birth for at least two years. Nearly 90 percent of the husbands and wives surveyed said they approved of family planning.

Although 77 percent of the women expressed an interest in controlling their fertility, the DHS found only 8.7 percent of the married women were using any form of birth control in 1987. Over half of those contracepting relied on the rhythm method, and one-fourth used withdrawal or abstinence. Only 1.2 percent of the wives (14 percent of those contracepting) were using a more effective method like the pill, injectibles, or the IUD. Some 64 percent knew of one or more modern methods and 59 percent said they knew where to obtain them, but only 30 percent of the wives had ever used contraception.


FAO

Burundi farmers

In sharp contrast, over 90 percent of the husbands knew a family planning method, and just over one-half had used one. However, the husbands were most familiar with traditional methods and with injectibles; less than one-half knew any of the other modern methods.

While the knowledge and use of family planning was markedly higher in the urban area – which consists of one city, the capital Bujumbura – the high illiteracy, low living-standards, and lack of infrastructure has hindered the spread of family planning information and services into the countryside where 96 percent of the people live. Without a substantial change in these conditions, fertility is not likely to decline in the near future. The Burundi government favors family planning for health reasons, but stops short of supporting it to lower fertility rates.

The final results of the 1987 DHS will be published jointly in 1988 by the Burundi Ministry of the Interior and the Institute for Resource Development of Columbia, Md.

– M.K.

Balancing Food and Population

World food production is rising, but population is also increasing, and so are the numbers of those who, either temporarily or chronically, do not have sufficient food.

PRB's latest *Bulletin*, "Food and Population: Beyond Five Billion," by Peter Hendry, describes the present world of over 5 billion people where feast and famine – food shortages and food surpluses – occur simultaneously. The U.S. Government pays farmers not to plant crops, to cut surpluses and prevent further erosion, while also providing more than 19 million people a month with food stamps so they can obtain food.

The developing countries, with about three-quarters of the world's population, account for less than half of the production of major food crops.

An illustration of the food/population dynamic is that although production of food staples in North Africa and the Middle East is projected to expand at about the same rate as that of Asia, about 2.9 percent annually, owing to a much more rapid rate of population increase, they will achieve only a 0.2 percent annual increase in output per person, compared with a 1.4 percent annual growth rate in Asia.

Balancing population, food, and resources for sustained survival is a continual process.

The principal cause of hunger and malnutrition is poverty: the extent of popular access to gainful employment, to arable land, to suitable technologies determines nutritional status more than aggregate food production. The physical problems are much more tractable than the human problems.

Copies of "Food and Population: Beyond Five Billion" by Peter Hendry, the 40-page *Population Bulletin* (Vol. 43, No. 2, April 1988) can be ordered from PRB, Circulation Dept., P.O. Box 96152, Wahsington, D.C. 20090-6152, with checks payable to PRB. Prices are: $4.00 per single copy; 2-10 copies, $3.00 each; 11-50 copies, $2.50 each; over 50, $2.00 each. Orders for $50.00 or less must be prepaid and include $1.00 for postage and handling.

Consequences Of Ultra-Low Fertility

by Lincoln H. Day

This article is adapted from the author's paper read at the European Population Conference, Jyväskylä, Finland, June 11-16, 1987.

A great deal of ink has been spilled over the economic implications of highly effective birth control methods. But this ongoing revolution in reproduction is likely to have other, even wider, social consequences.

Suppose virtually everyone exercised complete control over fertility? What then? What are the likely demographic and social implications?

For purposes of discussion, let us assume that "complete" control over fertility means control over both the number of children and, within physiological limits, the timing of childbirth. Such extensive control is already widespread in most European populations, whether in Europe, North America, or Oceania. Thus, what can be said about its future consequences can in large measure be said about conditions already occurring. My discussion deals, therefore, with differences essentially of degree rather than of kind.

Individual Consequences

One likely consequence is improved individual health among children who are born. This would result from a lower incidence of childbirth at the youngest and oldest extremes of the mother's fecund period, the proper spacing of births, and the fact that the children born would truly be "wanted" children.

What about what some consider to be the "problem" of only children? Their proportion is very likely to increase. John Aird reports that some Chinese writers, reflecting upon the consequences of their country's one-child policy, foresee a generation of children "doted upon by parents and grandparents and treated by the state as privileged individuals in regard to health care, education, and employment opportunities."[1]

Some bulletins from China claim that the swollen numbers of only children are already becoming "spoiled, self-centered, inclined to immediate gratification, willful, disrespectful toward authority . . ." Aird notes.

Only children have long received a bad press – particularly, it seems, in English-speaking countries overseas. On the other hand, there are numerous claims based on psychological and sociological inquiries as to the "superiority" of only children. The real question, ultimately, is whether only children are more likely than children with siblings to develop into socially acceptable adults. But, so far, the studies of only children do not extend to adult behavior, nor do they consider anything that might reasonably be defined as socially significant. The only exception I know of is an effort I myself made recently using American data, the conclusion of which was that there was no difference whatsoever between only children and sibling children.

> Much concern about older age structure arises from misunderstanding

Status of Women

Control over fertility offers women greater independence and status by affording them more opportunity to acquire education and training, obtain employment outside the home, advance in a career, and earn incomes of their own. The extent to which such opportunities can, in the individual case, be realized will, of course, be much affected by the social setting – from employment possibilities to educational offerings to the availability of social services like public transportation and child care. But there are some countervailing demographic pressures that may be less obvious.

Take, for example, the situation of older middle-aged women in their 50s or 60s. As a result of recent gains in adult longevity, these women are expected to assume major responsibility in caring for their aged relatives. At the same time, because of historically high rates of marital dissolution, these same women are being called upon to provide care and comfort to their adult children experiencing marital difficulties, as well as to grandchildren needing care so that a single supporting parent – usually the mother – can go out to work.

Thus, the opportunities for greater independence and higher status afforded this group of older women by having had complete control over childbearing may not be realized because of demands on them resulting from demographic trends (greater longevity) and social trends (dissolution of marriages).

An Older Population

Control over fertility is obviously conducive to an older age structure. Proportions will be smaller in the younger ages, larger in the older; the extent of this being determined by how far fertility declines. Much of the concern expressed about older age structures seems to arise out of misunderstanding, emotion, and ignorance of causal relationships. Nonetheless, age structure deserves to be taken seriously, if only because it is the prime factor establishing the dimensions of retirement and pension programs in modern society.

However useful it may be for administrative purposes to plan or estab-

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lish eligibility for programs for the aged in terms of birthdays, the relation between age and need is not necessarily direct. Much depends on habits of life prior to old age: on diet, exercise, and the intake of drugs, for instance. Much also depends on contemporary conditions like air quality, environmental noise, and the availability of appropriate housing. Moreover, aging is as much a social and psychological process as it is a biological one. Aging cannot be prevented, but *when* aging begins and *how* it manifests itself may well be explained less by considerations of birthdays than by conditions of life.

The cost of public programs for the aged is not immutable. Some savings can be effected by introducing elements of means-testing, like the progressive taxation of pensions as a part of regular income. And certainly savings will result from a reduced proportion of the population in the younger, dependent ages. Moreover, the aged will presumably have had a lifetime of work behind them. It is not as though everyone else were suddenly to be called upon to provide economic support for some sector of the population taking no hand in supporting itself. Programs such as forced savings that enable the aged to support themselves largely, perhaps entirely, through earnings garnered during their peak working years will need to be developed and extended. So too will services that enable them to take care of most of their noneconomic needs without undue reliance on others.

Nor would the aged monopolize these services and facilities, many of which – for example, public transportation, walk-in health maintenance and counseling services, public spaces where one can be by oneself or meet people on an informal basis, inexpensive rental housing – will also be useful to other age groups, perhaps especially to children and young adults. And then, of course, it is worth remembering that the aged, in addition to helping themselves and one another, also often lend support to younger elements of the society – caring for children, extending financial help to relatives, or giving emotional support. The intergenerational "wealth flow" – whether economic, social, or emotional – is by no means all in one direction.

When Does "Aged" Begin?

Besides, what is "aged"? Following the usual demographic definition of "aged" as beginning at 65, the Swedish population is 80 percent more "aged" today than it was half a century ago; the British and Dutch, 70 percent more "aged" the West German, about half again as "aged" and the French, only a tenth more.

But suppose we employ a different – but no more arbitrary – type of demographic definition: namely, those in the age categories having less than 10 years' life expectancy at present rates. Under this definition, the increase in the proportion "aged" during this period is much reduced: from 80 percent down to about 30 percent in Sweden, from 70 percent down to about 15 percent in Britain and about zero percent in the Netherlands, and from 50 to zero percent in West Germany, and to an actual decline of about one-fourth in France.[2] To be sure, aging has occurred, but much less so by this arguably more socially and demographically meaningful criterion than by the purely chronological criterion commonly applied.

> Consequences of low fertility will depend on a host of non-demographic factors

Complete control over childbearing means that fertility could hold steady at no more than replacement level for an indefinitely long period – surely, given the fact of earthly limits, an ultimately desirable, even necessary, development. But it also holds out the possibility of remaining for long periods at *below* replacement level.

Fertility is currently below replacement in some 25 countries, most of them European. In many it is at its lowest level ever; in most, it has been below replacement for over a decade. Although numerical decline itself has yet to occur in more than a few of these countries, such declines can probably be anticipated in most of them within a few decades.

Demography Is Not Everything

Population decline as a result of low fertility is such a recent phenomenon in modern human experience that its consequences are by no means certain. For many countries, the prospect of numerical decline is disquieting, raising fears of all sorts of things, from labor shortages and wage inflation to race suicide and declines in national "vigor."

The effects of decline may vary, however, depending how far below replacement fertility actually falls and how long it remains there. Certainly the consequences will depend on a host of nondemographic factors – factors that may, in fact, exceed the demographic in importance. We must beware of demographic determinism. Demographic factors set limits, but these limits are ordinarily very broad.

To take one instance: If current, unusually low fertility levels continue (which may or may not happen), many years would pass before these populations experienced numerical declines sufficient to reduce numbers to what they were on the eve of World War II – a level arguably sufficient for any legitimate national purpose, including maintenance of an identifiable national culture and lifestyle.

Starting now, it would take, for example, another 42 years for Austria to reach that number; 52 years for Denmark and West Germany; 58 for Italy;

Continued on next page

Demographer's Page

Continued from preceding page

65 for Sweden and the United Kingdom; 81 for the Netherlands and Norway; and 131 for France. And this is assuming that fertility remains at what for most of these populations are the lowest levels in their history.

The populations reaching those sizes equal to what they were on the eve of World War II would indeed have age structures older than those of their numerical counterparts of that earlier time. This would be so however old age was defined. But if old age were defined as beginning when life expectancy is less than 10 years, the increase in the proportion "aged" would be more modest – some 25 to 40 percent less – than if it were defined, in the usual way, as commencing at age 65.

This is very likely an extreme scenario, but assuming fertility were to remain as low as it now is, surely a lot can happen in 42 to 131 years. Population may set the stage for economic and social change, but it is unlikely to be a prime determinant of the outcome in countries exercising extensive control over childbearing. Nor, depending a bit on your perspective, could the changes envisaged in such demographic processes be viewed as occurring very suddenly. We are not talking here about something like a baby boom that in a year or two could theoretically introduce into the age structure a cohort double the size of its immediate predecessor.

Finally, a decline in numbers, far from being wholly undesirable, could actually open up a lot of opportunities, particularly with respect to improving the quality of life and bringing human numbers, life styles, and consumption patterns into better alignment with ecological and physical reality. Surely in any rational sense, one has to find this a reassuring prospect.

References

1. Aird, J. S. Coercion in family planning: causes, methods, and consequences. In Joint Economic Committee, U.S. Congress, *China's Economy Looks toward the Year 2000. 1. The Four Modernizations.* Washington, DC: GPO, 1986.
2. United Nations, *Demographic Yearbook* for 1949-1950, Table 4; for 1960, Table 5; for 1983, Tables 7 and 22.

What the DHS Has Achieved

Informed decisions about family planning and health prevention measures can only be made when reliable and accurate data are available. What kind of contraceptives are in use and who uses them? How long do mothers breastfeed? What are a country's mortality and fertility rates?

Surveys from 30 developing countries are now being released, as the U.S. AID-funded Demographic and Health Surveys Program (DHS) nears its fifth anniversary.

The surveys give details of the health status and family planning practices of 12 African, 8 Asian and Near Eastern, and 10 Latin American and Caribbean nations.

The program, part of Westinghouse's Institute for Resource Development (IRD), is gathering data from women between the reproductive ages of 15-49. Survey samples range from 3,000-12,000 respondents. The program follows the earlier World Fertility and Contraceptive Prevalence Surveys, adding to worldwide knowledge about health and population.

Findings from the 35 surveys are being published as Preliminary Reports, First Country Reports (a comprehensive report of survey findings), and Summary Reports, in each country's language. First Country reports for El Salvador and Brazil have been published. Other reports from Peru, the Dominican Republic, Colombia, Ecuador, Sri Lanka, Morocco, Nepal, Burundi, Liberia, Nigeria, and Senegal are nearing completion. (PRB's IMPACT project is lending technical assistance to Westinghouse to help further the goal of reaching policy makers with the Summary Reports.)

To speed data analysis and dissemination of survey results, DHS trained in-country staff to use microcomputers, driven by a new software package – Integrated System for Survey Analysis (ISSA) – that it developed for the program. ISSA facilitates data entry, editing, and tabulating. The package will soon be released in the U.S. for $325 (this includes some user support).

The Studies in Family Planning series is publishing results of the DHS surveys under a new section entitled "Data."

In addition, DHS is making its questionnaires, interviewer's manuals, supervisor's manual, sampling manual, and other field questionnaires available for study through regional depositories and selected libraries.

Recently, Guatemalans were confronted by some of their countrymen and women armed with small plastic boxes that in fact turned out to be laptop computers. DHS interviewers conducted the laptop experiment to test the effectiveness of using portable computers for interviewing.

Undoubtedly one aim of the experiment is to cut down the 12 months it takes from completion of field work to publication of First Country reports. If the experiment succeeds, the laptops may become a common sight in rural areas of the Third World as instant surveys of populations are created.

– S.G.

Bulletin Errata

After PRB's February 1988 *Bulletin*, "Demographics: People and Markets," emphatically explained the differences between "household" and "family," we turned right around and mixed up the two on page 10, which states that "average *family* size has undergone a precipitous decline" instead of what we meant to say, "average *household* size has undergone ..."

In the same section on households and families, the percentages were inadvertently omitted from Figures 4 and 5. To help readers interpret the figures, the following table provides the missing information.

Type	Figure 4 Percent of total households 1960	 1985	Figure 5 Percent of growth in households, 1960-85
Non-family households	15	28	48
Families with			
single male heads	3	2	2
single female heads	7	12	18
married couples, children	44	28	2
married couples, no children	31	30	30

Projecting the USSR's Population

The Center for International Research of the U.S. Census Bureau has recently released *Estimates and Projections of the Population of the USSR—1979 to 2025.*

Its methodology assumes zero net migration. Emigration has amounted to only 500,000 in the entire postwar period and present levels are very low. Future mortality patterns are assumed to continue the current trend of slowly rising life expectancy, partially a result of an anti-alcoholism campaign, from about 69 years at birth to about 77 by 2025.

Soviet fertility has risen in the 1980s, perhaps in response to 26th Party Congress measures in 1981 granting partially paid maternity leave for women at their jobs for at least one year, some provision of housing for married couples, small lump sum payments upon births, and other incentives. Although the effects of such measures are difficult to gauge, the total fertility rate (TFR) did rise from an average of 2.3 lifetime births per woman in the early 1980s to about 2.5 in 1986.

The obvious question centers on the continued apparent success the government may or may not have in maintaining higher fertility levels. The "medium" series assumes that Soviet fertility will show a brief rise following initiation of pronatalist policies, but quickly decline to the previous low level. This pattern has in fact been seen in a number of Eastern European countries. Thus in the medium series, fertility is assumed to decline to a TFR of 2.1 by 2025.

In the "high" series, fertility is assumed to follow the "Romanian model" thought to occur from the imposition of more stringent pronatalist measures. Under this scenario, the TFR rises to 2.75 by 2025. Finally, the "low" series assumes that the USSR will follow Western European experience and see its TFR decline to 1.5. This latter series would certainly imply unusually low fertility for the Asian and Moslem Republics of the USSR and very low fertility among ethnic Russian women.

These three scenarios result in a 2025 population range of 82 million. But the low series' growth rate in 2025 would be about zero compared to 1 percent in the high series with a resultant annual growth of 4 million.

—C.H.

SOFTWHERE

World Development Indicators is a software package consisting of economic and social data indicators for countries of the world, as reported in the latest World Bank annual, the *1987 World Development Report.* Summoned up on a personal computer, the Report's voluminous data can be studied to identify significant relationships, compare economic indexes, sort and rank, display tables and graphs, and conduct advanced statistical analysis.

The Bank's diskettes are available in either of two versions for the IBM PC or compatibles: Lotus 1-2-3 WKS format (for Lotus version 1A or higher) or .PRN format (for importation into most other graphic, spreadsheet, database, or text software). A set of instructions and a complimentary copy of the most recent (English) edition of the *World Development Report* is included. Cost for either version is $95.00. Call or write: World Bank Bookstore, 701 18th St. NW, Washington, DC 20433. (202) 473-2941.

—D.L.

POPULATION UPDATE

Estimated United States Population:

As of December 1, 1987	244,799,000
As of December 1, 1986	242,577,000

The above estimates, the latest available, include armed forces overseas and are from U.S. Bureau of the Census, *Current Population Reports,* Series P-25, No. 1016.

Estimated World Population:

As of March 1988	5,098,000,000
Annual growth	87,000,000

Estimated by extrapolation from the mid-1987 population on PRB's *World Population Data Sheet.*

Latest Provisional Statistics for the U.S.: November 1987

	12 months ending with November					
	Number		Rate			
Item	1987	1986	1987	1986	1985	1984
Live births	3,812,000	3,739,000	15.7	15.5	15.8	15.6
Deaths	2,121,000	2,102,000	8.7	8.7	8.8	8.6
Natural increase	1,691,000	1,637,000	7.0	6.8	7.0	7.0
Marriages	2,407,000	2,387,000	9.9	9.9	10.2	10.5
Divorces	1,159,000	1,158,000	4.8	4.8	5.0	4.9
Infant deaths	37,800	39,000	9.9	10.5	10.5	10.6
Population base (in millions)			243.1	240.8	238.1	235.9

Note. Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source. Monthly Vital Statistics Report (Vol. 36, No. 11) from the National Center for Health Statistics.

TAKE A NUMBER

Milestone: Infant mortality in the United States quietly passed a threshold in the 12-month period ending November 1987 – its first year below "double figures." The provisional rate for that period was 9.9 infant deaths per 1,000 live births, down from 10.6 for the same period in 1984.

How We Live and Marry (Or Don't): The latest published data from the Census Bureau's Current Population Survey, *Marital Status and Living Arrangements: March 1986*, details just how much household formation has changed since 1960 in the United States. In 1960, only 9 percent of children below age 18 lived with one parent, a figure which rose to one in four by 1986. Among whites in 1986, 18 percent of children lived with one parent, while for Hispanics and blacks the proportions were 30 and 53 percent, respectively. Delayed marriage, a trend which began to take off in the 1970s, continues to accelerate in the 1980s. In both 1960 and 1970, the percentage of women ages 25-29 who had never married was a steady 10.5 percent, but by 1980 the figure has risen to 20.9. In the first six years of the '80s, the figure jumped to 28.1. And, the number of unmarried-couple households, or POSSLQs – persons of the opposite sex sharing living quarters – rose to 2.2 million from 1.6 million in 1980 and 0.4 million in 1970.

China's Population Trend Headed in Opposite Direction: The baby boom which began in China in 1986 appears to have continued in 1987, perhaps reflecting a pent-up desire for births delayed in the recent past, improving economic conditions for some, and an increase in the number of marriages in 1986. A Chinese survey indicated that only half of couples in cities and towns wished to limit themselves to one child and that 90 percent of the large rural majority want 2 or more children. The family planning program has been described as "out of control" or "semi-controlled." The current situation should not overshadow the past remarkable successes of the Chinese campaign; it may be inevitable that the rapid imposition of stringent measures will ultimately lead to a "backlash" for a time.

Here and There How low could fertility in West Germany go? That was the question as the country set a record low total fertility rate (TFR) of 1.3 lifetime births per woman in the early 1980s. Well, births were up in 1986 and early returns for 1987 suggest that the TFR has risen to 1.4. The new holder of the claim to the lowest fertility could be Italy, although corroborating data are not yet in.

– *C.H.*

POSITIONS/ PROFESSIONALS

Assistant Professor of Sociology, Bowling Green University; a tenure-track position beginning August 1988. Must be able to teach courses in demographic methods, market demography, and population forecasting in graduate program in applied demography. PhD required. Send letter of application, vita, and three letters of reference to: Personnel Committee, Population Studies Program, Dept. of Sociology, Bowling Green State University, Bowling Green, Ohio 43403. Affirmative Action/Equal Opportunity Employer.

ADDENDA

Broadcasting, The News magazine of the Fifth Estate

"Red Skelton and I were in the top 20 or 15 or something. Then CBS started this demographics thing. They said we had a large audience, but our people were too old and weren't buying anything our sponsors were selling. I couldn't understand that. Neither could Red. He called me [and] said, 'What the hell are demographics?' I said, 'I haven't the slightest idea.'"

– Jackie Gleason

The Red Skelton Show was last broadcast on CBS on June 23, 1970.
The Jackie Gleason Show was last broadcast on Sept. 12, 1970.

CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in Current Readings. Publishers may address review copies to Book Review Editor, POPULATION TODAY, Population Reference Bureau, 777 14th St., N.W., Washington, D.C. 20005.

WORLD POPULATION POLICIES (Vol. 1.), compiled by the Dept. of International Economic and Social Affairs, United Nations. New York: Population Studies #102, 1987. 247 pages. $28.00. ISBN 92-1-151165-8.

This is the first of three volumes to be published by the United Nations regarding the population policy of each of its 170 Member States as well as some Non-Member States. This first volume contains countries from A to F. Volumes II and III, which should be available by 1989, will list countries from G to N, and from O to Z, respectively. The information presented is culled from the Population Policy Data Bank, which is maintained by the Population Division of the Dept. of International Economic and Social Affairs.

Excellent summaries of population policies are given for each listed country, as well as concise but comprehensive views of the demographic background and context within which these policies must function. Basic demographic indicators are provided; population size and growth, age structure, mortality, morbidity, fertility, nuptiality, international migration, urbanization, and spatial distribution of the population. The current official government perception of each of these indicators is also provided. The general policy framework in each country is presented, including the overall approach to population problems and the importance of population policy in achieving the development objectives that each country considers important.

The volume outlines the availability and sources of demographic data and briefly discusses the integration of population issues within development planning. It offers governmental policies and measures in regard to changes in demographic indicators and includes a note on the status of women. It even provides a detailed map of each country showing, cities, roads, railroads, and airports.

World Population Policies presents an important and useful summary of international demographic information. When the series is complete, it will represent an excellent resource for all who share an interest in population and development.

– Judy C. Felt

COMPARATIVE STUDY OF FERTILITY CONTROL EXPERIENCES IN REPUBLIC OF KOREA AND REPUBLIC OF CHINA, prepared by the Korea Institute for Population and Health and Taiwan Provincial Institute of Family Planning. Taipei: Chinese Center for International Training in Family Planning, 1987. 247 pages.

This volume consists of six papers presented at a workshop jointly sponsored by two population organizations – one from Korea, one from Taiwan – held Nov. 3-10, 1986, in Seoul, Korea. Every subject is discussed by a researcher from each country.

The first section gives a general overview of the socioeconomic background of each country and development of population policy. Cost-effectiveness analyses are also presented for some family planning programs implemented since the early 1960s. In the second section, national population projections, 1985-2025, are shown in detail. Anticipated changes in population size, basic vital rates, age structure, i.e., aging of population, and the socioeconomic implications are discussed. Two other papers cover contraceptive discontinuation and failure rates. (They are estimated based on the 1985 national level survey of each country by using life-table methods.)

A number of tables and appendices are provided. They contain abundant information about the populations of Korea and Taiwan. Contraceptive prevalence, discontinuation, and failure rates are presented by five-year age groups, marital status, number of children, and other socioeconomic characteristics of users. Readers can see which contraceptive method was used most and which one had the highest rate of discontinuation or failure by which users and for what reasons.

Both countries stated that they had achieved replacement level fertility and more than 70 percent contraceptive practice (among married-women age 15 to 44) by 1985, which are preliminary goals of their fertility control policy integrated into socioeconomic development plans. Next they face the challenge of developing social security systems.

This volume will be interesting not only for those studying Korea and Taiwan, but also for anyone interested in the whole area of fertility control or in the future of the world's newly industrializing countries (NICs).

– Machiko Yanagishita

Books Received

CITIES OF THE WORLD (3rd ed.), edited by Margaret Walsh Young and Susan L. Stetler. Detroit, Mich.: Gale Research, 1987. 3,268 pages in 4 volumes. $245.00/set (cloth).

HOMICIDE, by Martin Daly and Margo Wilson. Hawthorne, NY: Walter de Gruyter, 1988. 328 pages. $42.95 cloth, $18.95 paper.

MALTHUS, by Donald Winch. (Past Masters Series) New York: Oxford University Press, 1987. 117 pages. $18.95 hardback, $4.95 paper.

ZIMBABWE

Population (1987 est.): 9.4 million
Land area: 151,000 sq. miles
Births per 1,000 pop.: 47
Deaths per 1,000 pop.: 12
Rate of natural increase: 3.5 percent
Total fertility rate: 6.5 children per woman
Infant mortality rate: 76 infant deaths per 1,000 live births
Life expectancy at birth: 57 years
GNP per capita: $650
Capital: Harare

by Wendy Patriquin

Formerly known as Rhodesia, Zimbabwe is a California-sized country in South-Central Africa, just north of South Africa. The majority of the population is African, but there are about 100,000 whites, 20,000 coloreds (persons of mixed race), and 10,000 Asians. The Africans are divided into two major language groups: the Mashona, about 80 percent of the population, and the Matabele, about 19 percent of the population. Most of the whites, primarily of British descent, arrived in Zimbabwe after World War II, but their numbers have been decreasing rapidly since independence in 1980. English is the official language and is spoken by the white population and understood, if not always used, by more than half of the blacks.

Between 1923, when the British South African Company ended its control of Rhodesia, and 1980, when it became independent Zimbabwe, the country was an internally self-governing colony with its own legislature, civil service, armed forces, and police. The European settlers controlled the government and Great Britain would not grant independence to Rhodesia until the colonial government made some move toward eventual majority rule.

In 1965 the conservative government of Ian Smith came to power trying to maintain the Europeans' dominant position and refused to make this move. He issued a Unilateral Declaration of Independence from the U.K., which that government considered illegal and unconstitutional. As a result the UN Security Council, for the first time in its history, called upon nations to impose mandatory economic sanctions on a country. It was not until 1976 that the Smith government agreed in principle to majority rule. An agreement was reached in December 1979, and Robert Mugabe formed the first government of Zimbabwe as a result of elections held in February 1980.

Since independence, rifts have developed between the black nationalist leaders Robert Mugabe and Joshua Nkomo, and this rivalry between these two men and their parties continues. There has been some guerrilla activity in rural areas and antigovernment dissidence creating security and economic problems.

Zimbabwe's high plateau (veld) is endowed with a broad range of natural resources, which should provide for sustained economic growth. It has large mineral deposits including coal, asbestos, copper, nickel, gold, and iron ore. Besides a well-developed electrical power network, there is a good infrastructure of paved roads and a vital railroad link with neighboring South Africa. Because of the trade sanctions imposed between 1965 and independence, the country had to look inward for production, so the manufacturing sector of the economy is well developed. Agriculture is also an important part of the economy with major cash crops being tobacco, corn, wheat, sugar, cotton, and cattle.

The government sees the most urgent problems of the country as being the resettlement of displaced persons, and reconstruction of roads, health establishments, and schools destroyed during guerrilla activity. The government considers the fertility level to be too high and will provide some interventions to control growth. The fertility level is considered by the government as being too high, requiring some interventions to control growth. Current levels of immigration are also considered too high and it is hoped that these too can be reduced in the future.

In 1984 a reproductive health survey was conducted in Zimbabwe. It was found that, among other things, Zimbabwe has the highest rate of contraceptive use in sub-Saharan Africa – 38 percent of currently married women were using some form of family planning. Twenty-seven percent were using a modern method.

John Riber DSR, Inc

Zimbabwe's highveld is rich in resources.

POPULATION TODAY

Vol. 16, No. 5 May 1988

FEATURES

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Numbers behind the latest *World Population Data Sheet* foreshadow increase of a billion people per decade—faster than previously projected

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Collision between Azeri and Armenian populations highlights Soviet ethnic diversity

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We tend to take those numbers for granted, but how solid are they?

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A new billion coming every decade? (See page 3.)

PRB A publication of the Population Reference Bureau, Inc.

FROM THE EDITOR'S DESK

Here at 777 14th St., one of our duties is answering population information requests from both PRB members and the general public.

Some callers apparently believe that numbers equal data. But population numbers are incomplete without one vital ingredient – the time period covered. In demography, there's no such thing as *data sans date*.

Other seekers go to the opposite, optimistic extreme, on the order of: "What I'd really like is the April 1988 population of metropolitan Timbuktu. But if that figure's not available yet, I can settle for March, I guess . . ."

With population figures as with Instamatic photos, there is inevitably a gap between the moment the data are "snapped" and the moment they come back from the drugstore. Demographers are well accustomed to rattling off the phrase: "The most recent year for which data are available . . ."

For those requiring express service, there are *provisional* data. But they're labeled provisional because early errors may not yet have been caught.

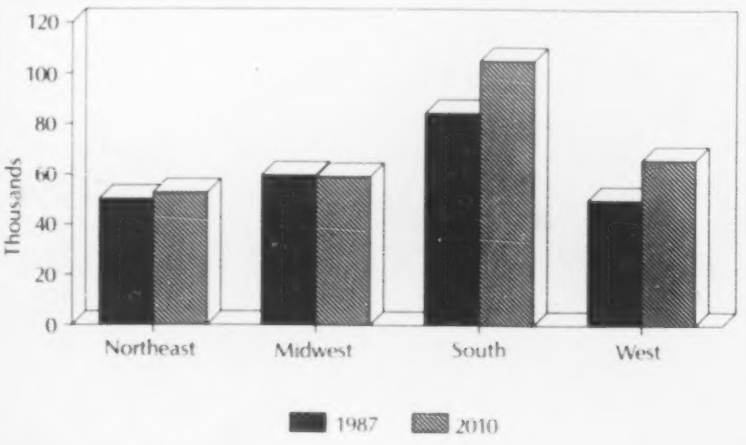
Finally, for the person who can't wait a single microsecond, there are *estimates*. However, they are just that – *estimates*, in which past data are tweaked and adjusted in ways that are thought to compensate for the passage of time.

Beware of data when they're too old – and when they're too new. But in Timbuktu's case, its population in 1963 was a certified 8,735, according to the *Encyclopedia Americana*, and our advice is – please – try to live with this number.

– Art Haupt

SPEAKING GRAPHICALLY

U.S. Regional Populations 1987 and 2010 (Projected)



See also "Take a Number" page 10

Source: U.S. Bureau of the Census

POPULATION TODAY

VOL. 16, NO. 5 **May 1988**

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Demographic Editor: Carl Haub
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A Billion More People per Decade?

Global population during the late 1980s may be growing faster than previously expected – a trend with important demographic implications for the future.

The latest *World Population Data Sheet*, published this month, shows that PRB's population estimates for 1988 are diverging somewhat from the level expected in the "medium" series projection of the United Nations Population Division, the most often-cited series.

Thus far, these divergences are small. But they presage greater discrepancies and, if the divergences continue in the coming years, they could, by the early 21st century, result in global numbers billions greater than previously expected.

The Data Sheet, prepared by PRB demographers Carl Haub and Mary M. Kent, shows a mid-1988 global total of 5,128,000,000 people. This approaches the 1988 world total of 5,144,000,000 from the high variant projection series – based on the highest assumptions of fertility – of the UN's most recently published projection series (those for 1984).

The differences in these absolute numbers mean far less than the actual progress of *rates*, in particular the total fertility rate (TFR), or average number of children per woman. TFR decline has been slower in India than had been anticipated earlier in the decade. And China's birth rate rose unexpectedly in 1986 and stayed up in 1987. Their large populations have kept the world's growth rate at about 1.7 percent rather than 1.6 as projected.

So far all the Data Sheet figures can suggest is something we should have known all along. As time passes, many countries will follow the demographic path set out for them, but some, perhaps many, will not. To date, the data reflect that, worldwide, fertility is not declining as quickly as projected and that world demographic trends are showing a tendency to conform more to the U.N.'s "high" series projections.

PRB's Data Sheet incorporates information on recent fertility and mortality trends as it becomes available. And what is happening is that fertility levels in some countries are not declining in the tidy, smoothly curved way many projections supposed they would. In particular, in a number of major less developed countries, fertility has leveled off or actually risen.

This means that close to a billion people per decade could be added to earth's population over the next few decades.

Status Report

Here is where demographic measures stand among the world's nations:

The MDCs (more developed countries), which contain 23 percent of world population, remain almost static. The fertility of the MDCs (defined geographically as being the countries of Europe, North America, Japan, Australia, and New Zealand) remains very low: 0.6 percent rate of natural increase, a TFR of 1.9. While there are some changes in individual countries (fertility is up slightly in West Germany and the USSR, and the same or down in others), the net effect is nil. No surprises here.

Data Sheet Highlights

- World population now stands at 5,128,000,000 as of July 1988.
- Humanity is increasing at 1.7 percent a year, basically the same as in the early 1980s. If this rate were to continue unchanged, world population would double by 2022. (It is presently double what it was in 1950.)
- About 1.55 billion people will be born during the next decade, while 0.5 billion people will die, for a net gain of approximately a billion.
- The less developed countries (LDCs) contain 3.9 billion people (77 percent of global population). The more developed countries (MDCs) contain 1.2 billion (23 percent).
- Women around the world are having an average of 3.6 children during their lifetime (total fertility rate).
- Of 142 LDC countries for which information is available, 68 feel that their birth rate is too high.

Several population giants, specifically China, India, and Pakistan, show fertility decline stalled or even reversed. Because its great size overwhelms world statistics, China (whose birth rate has increased since 1985) was primarily responsible for an increase in the world's overall birth rate in recent years. India, the world's second largest country, has probably seen only a slight decline in birth rates. Fertility there is running above the UN estimates, as is the case in Pakistan.

Many African countries show high – in some cases increasing – fertility that is contributing to the stall in world fertility decline. There is little evidence that birth rates are declining in Nigeria, for example, or Ethiopia, not to mention the many smaller high-fertility African countries such as Somalia or Rwanda (the latter sharing with North Yemen the world's highest national TFR, 8.5). Kenya, which still has the highest crude birth rate, shows no documented evidence of falling birth rates. In most of these countries, modern contraception is employed by less than 10 percent of the married women of reproductive age; in many African countries, less than 1 percent use effective family planning.

Numerous LDCs (less developed countries) have, by contrast, managed to lower their growth rates, including some whose fertility decline had previously been thought to have stalled. Many of these tend to be countries making the most economic headway as well. These are the "NICs," or Newly Industrialized Countries (a fashionable if ambiguous term describing a group of LDCs which are rapidly changing into highly urban, industrialized states with rapid economic growth).

Indonesia is the largest country to have registered significant declines in recent years, but Brazil, Mexico, Venezuela, South Korea, Sri Lanka, and Taiwan are other examples. Modern contraceptive use is high in all of these countries, ranging from over 40 percent of currently married women in Mexico to over 62 percent in Taiwan.

Continued on page 8

Ethnic Strife In USSR

Soviet nationality protests and violence have been in the news in recent months. In early March violence erupted between the Christian Armenians and the Turkic Moslem Azeris in a dispute over a largely Armenian-populated area in the Transcaucasian republic of Azerbaydzhan.

While the disputed area is tiny, these events are of greater significance when seen in the context of Gorbachev's policy of Glasnost. Because the events are taking place in the current atmosphere of greater tolerance for public expression and political reform, some Western observers believe that Glasnost is being threatened together with the future of East-West relations. Communist Party conservatives, already nervous about the new policy, may see this as verification of their fears: liberalization leads to civil disobediance and social unrest.

All of this is taking place in Transcaucasia, a southwestern area of Soviet Union (see map on page 8). The Armenian republic had a 1979 population of 3 million, 94 percent of whom are Armenians. The Azerbaydzhan republic had a 1979 population of 6 million, 78 percent of whom are Azeri.

To put the conflict into the context of the 100-plus ethnic groups that make up the Soviet Union, the Armenians and Azeris are relatively small, comprising 1.6 percent and 2.1 percent respectively of the national population.

At issue is the autonomous region of Nagorno-Karabakh, a 1,740 square mile area located in Azerbaydzhan about 10 miles from the Armenian border.

Slightly smaller than Delaware, this is a dry mountainous region of rich farmland with a population of 170,000, 81 percent of whom are Armenian. As a region within Azerbaydzhan, Nagorno-Karabakh is governed by Azeris. Armenians argue that since 1923, when the current borders were drawn, they have experienced ethnic discrimination and are being driven out of Nagorno-Karabakh. Their chief complaints are that Armenian language is not used in schools; radio and television broadcasts cannot be received from Armenia; newspapers and publications

Continued on page 8

Countdown to 1990 Census

In late March – just before census questions were to be submitted to Congress – the Census Bureau and the White House's Office of Management and Budget (OMB) announced final agreement on the questionnaire content and sample size to be used in the 1990 Census. This move apparently resolved the dispute over the decennial census that blew up in fall 1987, to considerable surprise and controversy among the population community (see *PT*, October and November 1987).

Last year OMB had blocked the Census Bureau's original questions and sampling proposal for 1990, with the stated intent of easing respondent burden.

The long census form with some 60 questions that covers a sample population will now be sent to 17.7 million households – a reduction from 1980 sampling rates, but still about one in every six households. The long census form is estimated to take a respondent 30 to 45 minutes to complete, compared to 15 minutes for the short form.

Nevertheless, questions which OMB had originally slated for deletion, such as fertility history, have been preserved. The Bureau appears to have weathered the dispute and can proceed with the census largely in the way it had planned in the first place. Meanwhile, the long-simmering issue of census adjustment continues, even though the Commerce Department decided in October 1987 that the Census Bureau would not adjust the 1990 count to reflect expected differential undercounts in different areas.

Former Census Bureau associate director Barbara Bailar, who resigned in January 1988, has argued that an adjustment is necessary for accuracy, and would not be a revolutionary change of procedure, since the Census Bureau's standard procedures already allow for a certain amount of imputation during the decennial census.

Subjects Planned for 1990 Census

100-percent (short form)

Population

Name
Household relationship
Sex
Race
Age
Marital status
Hispanic origin

Housing

No. units in structure
No. rooms in unit
Tenure
Vacancy characteristics
Congregate housing
Value of owned unit or rent paid

Sample (long form)

Social characteristics

Education – enrollment and attainment
Place of birth, citizenship, and year of entry
Ancestry
Language spoken at home
Migration
Disability
Children ever born
Veteran status

Economic characteristics

Employment and unemployment
Occupation, industry, and class of worker
Place of work and commuting to work
Work experience and income in 1989

Housing

Source of water and method of sewage disposal
Autos, light trucks, and vans
Kitchen facilities
Year structure built
Year moved into residence
No. bedrooms
Farm residence
Shelter costs, including utilities
Condominium status
Plumbing
Telephone
Utilities and fuels

Questions asked in 1980 that are being deleted in 1990

Employment five years ago
Marital history
Weeks spent looking for work
Housing questions on access to the unit, no. of units at address, no. of stories in building, no. of bathrooms, air conditioning and heating equipment, types of water heating and cooking fuel, and presence or absence of elevator

Without question, the 1990 Census will affect the apportionment of the House of Representatives (California, the biggest gainer, is expected to pick up six House seats, for a total of 51). But ironically, adjusting for undercount, were it to occur, would apparently have little or no impact on apportionment for the House of Representatives, according to demographers including PRB's William O'Hare (see note in "Take a Number," *PT*, April 1988). Later on, however, its impact could be significant in apportioning state legislatures and disbursing funds for federal programs.

Meanwhile, census preparation rolls on. Three dress rehearsals for 1990 are being conducted this spring and summer in St. Louis, East Central Missouri, and Eastern Washington. The next step after that: gathering the residential addresses for the computerized master address list used for mailing the forms on Census Day, Sunday, April 1, 1990.

—A.H.

Treasure Trove of China Data

Just off the presses: *The People's Republic of China Population Data Sheet*, a wall chart published jointly by the sociology departments of Peking University and the University of Texas at Austin.

The China Data Sheet provides province-by-province data with 38 columns of figures, including demographic, health, economic, literacy, family planning, and contraceptive information.

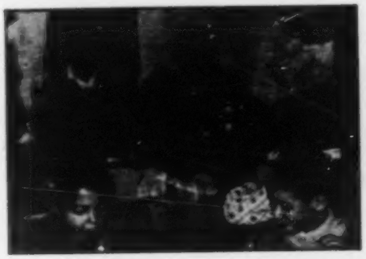
These include such measures as the "birth control rate" (this rate was 85.8 percent in 1985 and sums the percentages of married women of fecund age who were contracepting or sterilized, or whose husbands were sterilized) and the "One-Child Certificate Rate" (nationally, this rate was 18 percent of all married fecund women).

The chart measures 22 × 32 inches and is in both English and Chinese. Each one of China's 29 provinces, autonomous regions, and cities is covered, but not Taiwan, Macao, or Hong Kong.

The China Data Sheet costs $3.00 postpaid per copy (for orders of 10 or more copies, bulk rates are available). To order, contact: Dudley L. Poston, Jr., Population Research Center, University of Texas at Austin, Austin, Tex. 78712.

SURVEY REPORT

Morocco


FAO photo

Morocco promotes nutrition programs.

Visits to homes by family planning personnel (trained by the Ministry of Public Health to provide information and contraceptive supplies) are one factor leading to this country's unusually high family planning awareness. Some 98 percent of Moroccan women surveyed know about various methods of contraception.

The Demographic and Health Survey in this North African Moslem country found that 59 percent of the currently married women aged 15 to 49 had practiced contraception at some point. However, only 36 percent were contracepting when the survey was taken in the summer of 1987.

The survey also documented a decline in fertility, an important trend in this country of 25 million where 40 percent of the inhabitants are under age 15 and whose current growth rate would result in a doubling of the population in 26 years. The total fertility rate (TFR) over the five years before the survey was 4.9 total children per woman at present fertility rates, down from 5.9 in the 1979-1980 survey, with the greatest drop in births concentrated in the 15-19 age group.

Contraception was more prevalent among women over 30, urban residents, and those who already had 3 or 4 children. It was used twice as much by women with at least a secondary school education as those with less education.

Forty-three percent of those interviewed wanted no more children and 13 percent wanted to wait two years or longer to have another child.

The pill was far and away the most preferred contraceptive: 23 percent of the currently married women were using the pill while 3 percent were practicing the next-most-preferred methods—traditional withdrawal and the IUD. Although 77 percent of the women knew about female sterilization, only 2 percent had chosen this form of family planning. None of the women had partners who had been sterilized, and only 5 percent were even familiar with vasectomy.

Of the women contracepting, 34 percent received supplies from public health hospitals, centers, and dispensaries and 21 percent were supplied during the home visits sponsored by the Ministry of Public Health, with pharmacies, private clinics, and medical personnel also providing supplies.

Only 38 percent of the children in the survey between 1 and 4 years old had vaccination cards. Over 90 percent of these children had received protection against tuberculosis; almost 90 percent against polio, but less than 85 percent against measles.

The infant mortality rate is still high, 90 deaths per 1,000 births. Twenty-nine percent of the babies under age 5 had had diarrhea in the two weeks preceding the survey. Prenatal care of pregnant women is also deficient.

These figures, which come from a survey sample of 7,000 married women, 15-49, are reported in the revised preliminary report of the Demographic and Health Survey issued by the Ministry of Public Health and Westinghouse's Institute for Resource Development, IRD, of Columbia, Md.

—R.Y.

DEMOGRAPHER'S PAGE

Using Population Data

by Carl Haub and Mary Kent

Each year, the process of readying the statistics of the *World Population Data Sheet* for publication provides the Data Sheet's preparers with a free lesson in the availability of population data. In truth, it may be stretching matters a bit to employ the term "data" when referring to the evidence underlying some population estimates. Many users of the Data Sheet who call to discuss the numbers given for a particular country are surprised – not always pleasantly – to hear how little information can rightly be termed a "given."

The table on the facing page repeats an annual tradition in *PT* of printing the absolute numbers of births, deaths, etc. that lie behind the rates printed on the Data Sheet. But how solid are these numbers, really? Some commentators have suggested that the numbers could be off by some 10 percent, one writer putting the margin of error at 400 million in 1977.[1] No estimate of the margin of error will be ventured here, although there are reasons to think that, if the 400-million figure were reasonable at the time it was posited, improvements in coverage during the 1980s may have reduced it somewhat.

What Is Available?

As would be expected, the more developed countries generally have a monopoly on vital statistics registration considered "complete" and a good track record of census taking. Even in that august group, however, there are some problems.[2]

Censuses tend to undercount populations – a fact of which the U.S. court system is all too aware. Few developed countries evaluate undercounts and fewer still adjust for them; some countries have continuous population registers, which can be used to evaluate census results (and vice versa).

One often thinks of birth and death rates reported by developed countries to be truth in digital form – flawless numbers "carved in stone," so to speak. Some cautions prevail even here. In the course of researching the most recent numbers possible, one commonly discovers a different figure in a country's statistical yearbook, a monthly statistical bulletin, or a third-party compendium such as those of the United Nations or the Council of Europe. It may be that one is working with a "provisional" rate, i.e., not yet evaluated for errors. Or it may be a typographical error.

What about timeliness? Most birth and death rates for developed countries are for 1986. Infant mortality rates (IMR) often lag behind by one year, perhaps because there are relatively few infant deaths and the number of births (the denominator of the infant mortality rate), must also be evaluated. Since the year of reference does vary, it is not, strictly speaking, proper to rank countries on the IMR from the Data Sheet. That can only be done for the last year for which countries actually reported.

How solid are the numbers, really?

Life expectancy is even "worse." Country practices vary even more on the timeliness of the reporting of this headline-grabbing but rather complex statistic.

By now, it should be obvious that if statistics are less than perfect for the more developed countries, estimates for the Third World are even riskier. Some countries have little or no data upon which to base an estimate: Saudi Arabia and North Korea are examples. Some censuses, such as Nigeria's 1973 count, have been deemed unusable. But virtually every country has now taken a census. And survey data from programs such as the completed World Fertility Survey and the present Demographic and Health Survey have shed much light into some very dark statistical corners.

What Can Be Known?

Even without much of the newly available data, past estimates often were surprisingly good. For example, China's 1982 Census was the first modern count of the world's population giant made available in great detail. Based upon that count and birth and death rates reported since, we estimate that China's mid-1988 population at 1,087,000,000. But how good were estimates for China before the 1982 Census was taken? The United Nations projection for 1988 in the 1980 *Assessment* was 1,100,606,000, a difference of about 14 million in a country of 1 billion!

Such prescience is not always in evidence, of course. Precensal estimates for Côte d'Ivoire (formerly the Ivory Coast) put the 1975 population at a little under 5 million, but the country's first census, in 1975, counted 2 million more inhabitants, for a total of 6.7 million.

In short, demographic estimates have their limits, a fact that should come as no surprise. We may have a strong feeling that Country X's birth rate has declined in the past few years but lack an actual published estimate. Hopefully, the number that we finally use will be roughly representative of the actual situation. The Data Sheet embodies such an attempt to accurately, or at least reasonably, reflect the "state of the art" in what can be known. And we can hope that as time goes on, the art will continue to become more of a science.

References

1. Eberstadt, Nick, ed., *Fertility Decline in the Less Developed Countries*. New York: Praeger, 1981.
2. Actually, countries judged to have "complete" data (coded as a "C" in the United Nations *Population and Vital Statistics Report*) must only report coverage of 90 percent or better. Most probably are as complete as possible, however.

Carl Haub and Mary Kent are
demographers at PRB

1988 WORLD POPULATION DATA SHEET

Estimated mid-1988 Population, Annual Components of Change, Projected Population Change 1988-2000, and Annual Infant Deaths (by Region and for 10 Largest Countries in Population)

Area (country rank in parenthesis)	Population mid-1988	Annual births	Annual deaths	Natural increase	Projected population change, 1988-2000	Infant deaths
WORLD	5,128,139,000	141,415,000	52,190,000	89,225,000	1,049,460,000	10,949,000
MORE DEVELOPED	1,197,529,000	18,062,000	11,140,000	6,923,000	68,838,000	279,000
LESS DEVELOPED	3,930,610,000	123,353,000	41,051,000	82,302,000	980,622,000	10,670,000
LESS DEVELOPED (excluding China)	2,843,610,000	100,482,000	33,442,000	67,041,000	855,622,000	9,657,000
AFRICA	622,531,000	27,605,000	9,284,000	18,322,000	263,815,000	3,033,000
NORTHERN AFRICA	138,409,000	5,393,000	1,484,000	3,909,000	48,877,000	497,000
WESTERN AFRICA	194,117,000	9,026,000	3,435,000	5,592,000	85,118,000	1,127,000
Nigeria (8)	111,904,000	5,170,000	1,925,000	3,245,000	49,026,000	631,000
EASTERN AFRICA	186,095,000	8,997,000	2,868,000	6,130,000	91,595,000	979,000
MIDDLE AFRICA	63,501,000	2,820,000	1,077,000	1,743,000	25,820,000	331,000
SOUTHERN AFRICA	40,409,000	1,368,000	420,000	948,000	12,405,000	98,000
ASIA	2,995,405,000	84,387,000	29,235,000	55,152,000	615,128,000	6,910,000
ASIA (Less China)	1,908,405,000	61,516,000	21,626,000	39,890,000	490,128,000	5,897,000
WESTERN ASIA	123,744,000	4,617,000	1,174,000	3,442,000	45,754,000	410,000
SOUTHERN ASIA	1,136,771,000	40,267,000	15,108,000	25,158,000	311,425,000	4,467,000
Bangladesh (9)	109,471,000	4,740,000	1,817,000	2,923,000	36,329,000	640,000
India (2)	816,828,000	26,629,000	10,292,000	16,337,000	196,452,000	2,769,000
Pakistan (10)	107,467,000	4,643,000	1,558,000	3,084,000	37,799,000	562,000
SOUTHEAST ASIA	432,735,000	13,264,000	4,042,000	9,223,000	109,037,000	959,000
Indonesia (5)	177,427,000	4,861,000	1,774,000	3,087,000	36,266,000	428,000
EAST ASIA	1,302,155,000	26,239,000	8,910,000	17,329,000	148,912,000	1,074,000
China (1)	1,087,000,000	22,870,000	7,609,000	15,261,000	125,000,000	1,013,000
Japan (7)	122,721,000	1,399,000	761,000	638,000	7,299,000	7,000
NORTH AMERICA	272,320,000	4,250,000	2,333,000	1,917,000	24,160,000	42,000
United States (4)	246,104,000	3,864,000	2,141,000	1,723,000	21,851,000	39,000
LATIN AMERICA	429,454,000	12,558,000	3,237,000	9,321,000	107,296,000	719,000
MIDDLE AMERICA	111,372,000	3,573,000	737,000	2,837,000	31,408,000	189,000
CARIBBEAN	32,742,000	846,000	255,000	591,000	5,652,000	51,000
TROPICAL SOUTH AMERICA	237,791,000	7,049,000	1,865,000	5,184,000	62,636,000	445,000
Brazil (6)	144,428,000	4,087,000	1,141,000	2,946,000	35,059,000	258,000
TEMPERATE SOUTH AMERICA	47,549,000	1,089,000	380,000	709,000	7,600,000	34,000
EUROPE	496,765,000	6,419,000	5,125,000	1,294,000	9,730,000	82,000
NORTHERN EUROPE	83,851,000	1,100,000	945,000	156,000	723,000	10,000
WESTERN EUROPE	156,286,000	1,896,000	1,624,000	272,000	491,000	16,000
EASTERN EUROPE	112,813,000	1,697,000	1,286,000	411,000	4,335,000	30,000
SOUTHERN EUROPE	143,815,000	1,726,000	1,270,000	456,000	4,181,000	27,000
USSR (3)	285,917,000	5,690,000	2,773,000	2,916,000	25,083,000	145,000
OCEANIA	25,746,000	507,000	205,000	302,000	4,248,000	18,000

Source. Unpublished printouts used in preparation of the 1988 World Population Data Sheet. Numbers may not add due to independent rounding.

1988 World Data Sheet

Continued from page 3

This year's Data Sheet contains three special columns. The first is the rate of contraceptive use, or prevalence, which shows an impressive range of use of both modern contraceptives and contraception overall.

The second column shows the official government attitude toward its current fertility level (e.g., too high, too low, or satisfactory). The other measure, data availability, represents to what extent population statistics for a country are based upon reliable, recent sources (such as a recent census or official registers). While any country's population can be estimated, this process is obviously made more difficult when the estimate must be calculated by projecting a two-decade-old census on the basis of very sketchy survey results in the interim. By contrast, getting a solid estimate on a country which held a census last year and which also keeps a population register is a relative snap.

The world economy has not grown as rapidly during the 1980s as it has previously. The reasons for this are the subject of debate, but seem to be connected to the various oil shocks of the past decade and a half, as well as economic policies in various countries that have proven less than optimal. Some economists believe that debt owed to MDC lenders may also have contributed to a slowing of economic growth in the Third World.

If economic progress and population growth rates are inversely linked, as has been often posited, the next few years should make clearer whether a decline in population growth rates of various countries can continue in the face of their economic troubles.

– M.K. & A.H.

PRB members receive their copies of the *1988 World Population Data Sheet* in the same mailing as this issue of *Population Today*. Additional copies of the Data Sheet can be ordered from the Population Reference Bureau, Inc., Circulation Dept. P.O. Box 96152, Washington, D.C. 20090-6152, with checks payable to PRB. Prices are $2.00 ea.; 2-10 $1.75 ea.; 11-50 $1.50 ea.; over 50, $1.25 ea. Orders for $50 or less must be prepaid and include $1.00 (or 5 percent of order, whichever is greater) for postage and handling.

Soviet Ethnic Strife

Continued from page 3

are not printed in Armenian nor published by Armenians, and economic dependence on Azerbaydzhan has been encouraged by the closing or relocation of factories inside Nagorno-Karabakh.

In February, demonstrations began in Yerevan, the Armenian capital, immediately after the Communist Party Central Committee rejected an appeal for redrawing Armenia's border to include Nagorno-Karabakh. Soviet troops were sent to Yerevan and Nagorno-Karabakh to restore order. Gorbachev personally responded by saying this nationality issue would be examined in the upcoming Central Committee meeting. At Gorbachev's request Armenian activists agreed to a month-long suspension of their activities pending the outcome of the meeting. The following day, riots broke out in Sumgait, an oil and natural gas center in Azerbaydzhan. Official reports said 31 Armenians were killed and 150 others seriously injured.

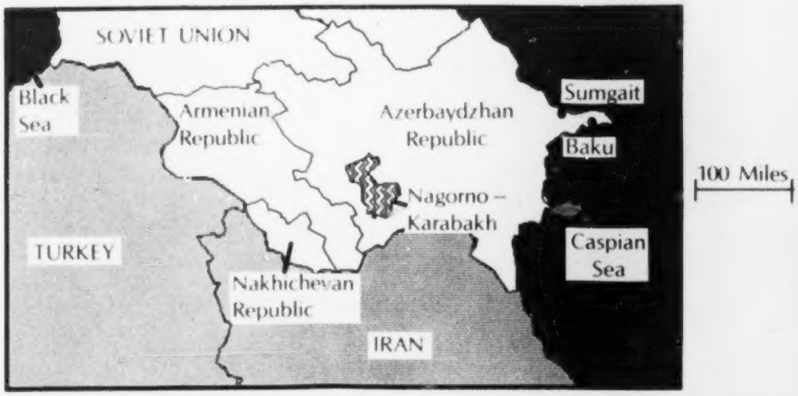
As foreign journalists are banned from the area indefinitely, there has been no way of verifying the reports, some of which have estimated that hundreds were killed. On March 8, hundreds of thousands of Armenians marched in memory of those killed in Sumgait. As the situation now stands, the party representatives have announced that no border changes will be made but that cultural and economic reforms will be introduced. Although the border issue will be reopened for discussion when the Central Committee meets in June, it is unlikely the Armenian borders will be redrawn to include Nagorno-Karabakh.

It is not widely recognized that the dispute between the Armenians and Azeris is one that has been brewing for decades and is part of a centuries-long animosity between Armenian and Turkic peoples. Karabakh became a disputed area in the wake of the Russian Revolution after a period of chaos in the Transcaucus region. Because of an agreement between Turkey and the Soviet Union, Stalin agreed in 1921 to award Karabakh to Azerbaydzhan to gain Turkish support against the West. Turkey's goal was to avoid having a large Armenian state on its eastern border because it just had responded in 1915 to signs of uprising by deporting its Armenian residents from Anatolia. In the process of deportation, about 1 million Armenians were massacred.

The prospect of a border change is unlikely because it would set a precedent for all other ethnic minorities in the Soviet Union. The Moslem nationalities alone account for 18 percent of the total population. Of all the nationalities in the Soviet Union, the Moslem populations, whose fertility has been growing at two to three times the rate of the European populations, most concern the national government. By 2000, some demographers have projected that ethnic Russians who are now 51.5 percent of the Soviet population will become a 49 percent minority.

The recent disturbances also concern the Soviets because the Azeris are primarily Shiite Moslems and the Soviets have long feared the spread of Moslem fundamentalism across the border from Iran and Afghanistan. This threat is somewhat lessened by the fact that with the exception of Azerbaydzhan, most Soviet Moslems are of the more moderate Sunni sect.

– Suzanne Hurley
research demographer



Worldwatch

State of the World 1988, the latest edition of the annual global status report – recently published by the Washington-based Worldwatch Institute – covers the phenomenon of ecological degradation around the world. The shrinking of tropical forests and desertification, the rise in the planet's mean climatic temperature, and the puzzling thinning of the atmosphere's ozone layer all testify to the growing, and so far uncontrolled, impact of a large human population on the ecosystem it so thoroughly inhabits.

The latest edition also points out a troubling relationship between world economic trends in the 1980s and population growth. The external debt of the Third World is now over $1 billion and increasing by some $50 billion a year, and, says Worldwatch, has grown beyond all reasonable hope of repayment. Interest payments mean that there is a $30 billion net capital transfer from the less developed countries (LDCs) to the more developed. In the past, the flow of capital had gone the other way, enhancing economic development in the LDCs.

The result is a vicious circle. "In many heavily indebted Third World nations," says Worldwatch president Lester Brown, "the economic and social progress that normally lowers birth rates has been replaced by falling incomes. As a result, populations continue to grow rapidly, destroying the environmental support systems on which future economic progress depends."

To counter this trend, the report recommends establishment of a "debt retirement fund" financed by the more developed countries with the aim of purchasing LDC debts at their market value in the world's financial exchanges. This would lift some of the debt burden from individual LDCs and at the same time facilitate more debt repayment than would be otherwise likely to occur.

Copies of *State of the World 1988*, by Lester R. Brown et al., are available from Worldwatch Institute postpaid for $9.95. Contact Worldwatch Institute, 1776 Massachusetts Ave. N.W., Washington, D.C. 20036.

SOFTWHERE

Facts-at-Your-Fingertips is a series of Lotus 1-2-3 (version 2.0) spreadsheet data files that contain information on U.S. children, youth, and their families.

After pulling these files up on an IBM PC or compatible, the user can investigate the status of U.S. children and easily massage the data into percentages and indexes, charts, and graphs. One file currently available from the developer, Child Trends, Inc., includes national data on births, birth rates, abortions, nonmarital childbearing, infant mortality, and low birth weight for babies of teenagers and women 20-24. Data are provided for the five-year periods 1960, 1965, 1970, 1975, and single years 1980 through 1985. A second data set gives cross-sectional adolescent-fertility data by state.

Child Trends, Inc. also plans to release another data set shortly, giving a national demographic profile of U.S. children. This will include a file on all children together; separate files on white, black, and Hispanic children; and a file breaking down data by single year of age.

Prices for this series are: $15.00 for the first copy of the diskette and $2.00 for each additional copy. Lotus, or another spreadsheet program capable of processing Lotus 1-2-3 (version 2.0) files, is required. For ordering information write or call Child Trends Inc., 2100 M St. NW., Suite 411, Washington, DC. 20037. Phone (202) 223-6288.

– *D.L.*

POPULATION UPDATE

Estimated United States Population:

As of January 1, 1988	244,966,000
As of January 1, 1987	242,742,000

The above estimates, the latest available, include armed forces overseas and are from U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1020.

Estimated World Population:

As of May 1988	5,114,000,000
Annual growth	89,000,000

Estimated by extrapolation from the mid-1988 population on PRB's *World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: December 1987

	12 months ending with December					
	Number		Rate			
Item	1987	1986	1987	1986	1985	1984
Live births	3,829,000	3,731,000	15.7	15.5	15.7	15.7
Deaths	2,127,000	2,099,000	8.7	8.7	8.7	8.7
Natural increase	1,702,000	1,632,000	7.0	6.8	7.0	7.0
Marriages	2,421,000	2,400,000	9.9	10.0	10.2	10.5
Divorces	1,157,000	1,159,000	4.8	4.8	5.0	4.9
Infant deaths	38,000	38,600	10.0	10.4	10.6	10.7
Population base (in millions)			243.4	241.1	238.3	236.1

Note: Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source: *Monthly Vital Statistics Report* (Vol. 36, No. 12) from the National Center for Health Statistics.

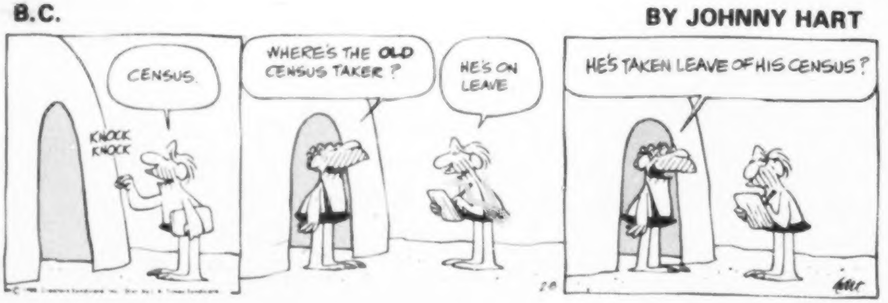
TAKE A NUMBER

U.S. State Populations from 1987 to 2010, according to U.S. Census Bureau projections released in April 1988. Also see "Speaking Graphically," page 2 of this issue.

U.S. CENSUS BUREAU ESTIMATES AS OF 1988 (numbers in 000s)

State	1987	1988	1989	1990	1995	2000	2010
U.S.	243,308	245,529	247,732	249,891	259,619	267,747	282,055
N.E.	50,140	50,278	50,425	50,577	51,293	51,810	52,496
Midw.	59,450	59,574	59,685	59,777	59,867	59,596	59,018
South	84,060	85,133	86,209	87,276	92,366	96,919	104,919
West	49,658	50,544	51,413	52,261	56,093	59,422	65,622
Alaska	544	554	565	576	636	687	765
Ala.	4,086	4,119	4,150	4,181	4,307	4,410	4,609
Ark.	2,386	2,400	2,414	2,427	2,482	2,529	2,624
Ariz.	3,432	3,542	3,649	3,752	4,218	4,618	5,319
Cal.	27,531	28,074	28,607	29,126	31,463	33,500	37,347
Colo.	3,308	3,350	3,393	3,434	3,637	3,813	4,098
Conn.	3,212	3,235	3,257	3,279	3,376	3,445	3,532
Del.	641	649	658	666	702	734	790
Fla.	11,962	12,249	12,535	12,818	14,189	15,415	17,530
Ga.	6,244	6,384	6,524	6,663	7,338	7,957	9,045
Hawaii	1,081	1,101	1,121	1,141	1,243	1,345	1,559
Ia.	2,826	2,803	2,780	2,758	2,652	2,549	2,382
Idaho	1,006	1,009	1,013	1,017	1,034	1,047	1,079
Ill.	11,569	11,584	11,599	11,612	11,625	11,580	11,495
Ind.	5,518	5,531	5,542	5,550	5,545	5,502	5,409
Kan.	2,469	2,477	2,485	2,492	2,515	2,529	2,564
Ky.	3,733	3,738	3,742	3,745	3,745	3,733	3,710
La.	4,504	4,507	4,510	4,513	4,517	4,516	4,545
Mass.	5,838	5,849	5,863	5,880	5,985	6,087	6,255
Md.	4,532	4,599	4,665	4,729	5,025	5,274	5,688
Me.	1,184	1,193	1,203	1,212	1,247	1,271	1,308
Mich.	9,191	9,231	9,266	9,293	9,318	9,250	9,097
Minn.	4,243	4,271	4,298	4,324	4,426	4,490	4,578
Mo.	5,100	5,132	5,163	5,192	5,304	5,383	5,521
Miss.	2,643	2,661	2,680	2,699	2,792	2,877	3,028
Mont.	814	811	808	805	798	794	794
N.C.	6,422	6,512	6,602	6,690	7,106	7,483	8,154
N.D.	674	669	664	660	643	629	611
Neb.	1,595	1,593	1,590	1,588	1,574	1,556	1,529
N.H.	1,058	1,088	1,116	1,142	1,251	1,333	1,455
N.J.	7,687	7,756	7,827	7,899	8,252	8,546	8,980
N.M.	1,518	1,557	1,595	1,632	1,809	1,968	2,248
Nev.	993	1,021	1,049	1,076	1,198	1,303	1,484
N.Y.	17,759	17,755	17,761	17,773	17,886	17,986	18,139
Ohio	10,767	10,779	10,787	10,791	10,742	10,629	10,397
Okla.	3,295	3,288	3,285	3,285	3,318	3,376	3,511
Ore.	2,716	2,733	2,750	2,766	2,828	2,877	2,991
Pa.	11,874	11,860	11,844	11,827	11,689	11,503	11,134
R.I.	982	989	996	1,002	1,029	1,049	1,085
S.C.	3,420	3,464	3,507	3,549	3,740	3,906	4,205
S.D.	707	707	708	708	711	714	722
Tenn.	4,848	4,891	4,933	4,972	5,135	5,266	5,500
Tex.	16,937	17,192	17,451	17,712	19,012	20,211	22,281
Utah	1,694	1,722	1,750	1,776	1,893	1,991	2,171
Va.	5,883	5,977	6,068	6,157	6,551	6,877	7,410
Vt.	547	552	557	562	579	591	608
Wash.	4,514	4,564	4,612	4,657	4,841	4,991	5,282
Wis.	4,791	4,797	4,803	4,808	4,811	4,784	4,713
W.Va.	1,902	1,886	1,871	1,856	1,786	1,722	1,617
Wyo.	506	505	503	502	495	489	487

ADDENDA


B.C.
BY JOHNNY HART
CENSUS.
KNOCK KNOCK
WHERE'S THE OLD CENSUS TAKER ?
HE'S ON LEAVE
HE'S TAKEN LEAVE OF HIS CENSUS ?

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CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in Current Readings. Publishers may address review copies to Book Review Editor, POPULATION TODAY, Population Reference Bureau, 777 14th St., N.W., Washington, D.C. 20005.

WORK, HEALTH, AND INCOME AMONG THE ELDERLY, edited by Gary Burtless. Washington, DC.: Brookings Institution, 1987. 276 pages. $26.95 hardback. ISBN 0-8157-1176-0.

The six articles in this volume are original research papers presented at a 1985 conference at the Brookings Institution in Washington and now published in book form. They pose critical policy questions that arise when a population ages: Does higher life expectancy mean that people are healthier and more able to work? Should the age of eligibility for Social Security be raised? What is the relationship between private asset accumulation and the Social Security system? How does the availability of Social Security benefits discourage work?

Three articles on health status of the elderly will be of most interest to demographers. James Poterba and Lawrence Summers ask whether lower mortality results in better or worse health for the surviving elderly. They conclude that average health status, by age, has not changed much despite fears that the "marginal-survivors" would be more frail and despite hopes that factors reducing mortality would also reduce morbidity.

Gary Burtless examines how a retiree's past industrial and occupational pattern affect his health status and mortality. Martin Baily models optimal retirement age and studies data about health and disability. He agrees with the 1983 legislation increasing the age of eligibility for Social Security, as long as the system also provides for workers who are disabled at younger ages.

The average reader will find most of these papers to be quite technical in both the modeling and the statistical methods used. In many cases, however, the sophisticated techniques cannot compensate for inadequacies in the available data. Thus, the authors cannot definitively answer the questions they pose. But they make valuable contributions to policy issues that are important now and will grow in importance as the U.S. population continues to age.

—Anne D. Williams

MALTHUS, by Donald Winch. *Fast Masters* series. New York: Oxford University Press, 1987. 113 pages. $18.95 hardback; $4.95 paper. ISBN 0-19-287653-8.

This excellent analysis of Malthus' thinking acknowledges his "having created the terrain over which demographic dispute continues to rage, forcing those who dislike or disagree with his conclusions to argue over issues which he was the first to dramatize." Donald Winch notes, however, that Malthus' position has "probably generated more vituperation, vilification, and misunderstanding than that of any comparable figure in the history of social and political thought."

The book firmly anchors "Population" Malthus in his time, 1776-1834, and in the swirling philosophical and political arguments about man and society raging after the American and French Revolutions and then the Napoleonic Wars.

A careful delineation of how Malthus' work on the relationship between the growth of population and food supply led to studies of other economic and political factors is equaled by the discussion of the constancy of what the author describes as the "theological utilitarianism" of Thomas Robert Malthus. "There was no conflict between Malthus the Christian moral philosopher and Malthus the scientist," says Winch, who is Professor of the History of Economics at the University of Sussex in England. Malthus, both a Newtonian scientist and an Anglican cleric, believed that society as well as the physical universe followed natural laws created divinely for the ultimate welfare of humanity. He said that "the science of political economy bears a nearer resemblance to the science of morals and politics than to that of mathematics." He sought the "golden mean," the proper proportions by which the rate of increase in population could be sustained without damaging living conditions, as he later sought stable growth through balancing demand with aggregate supply and capacity to produce.

Winch notes that Malthus wanted to show that the suffering produced by poverty was remediable. "Attempts to foster on to him post-Darwinian notions connected with eugenics, racism, genocide, and sociobiology are frequently a sign of the need to provide our scapegoats with a lineage." As to the "gloom and doom" and harsh social policies popularly associated with "Malthusianism," he also writes that "though our future prospects respecting the mitigation of the evils arising from the principle of population may not be so bright as we could wish, yet they are far from being entirely disheartening, and by no means preclude [the] gradual and progressive improvement in human society."

Winch clearly and concisely describes Malthus' thinking, where he went wrong, and why we can still learn much touching on current concerns from "Population" Malthus.

—Roberta Yared

SPOTLIGHT

AFGHANISTAN

Population (1988 est.): 14.5 million
Land Area: 250,000 sq. mi.
Births per 1,000 pop.: 48
Deaths per 1,000 pop.: 24
Rate of natural increase: 2.4 percent
Total fertility rate: 6.7 children per woman
Infant mortality rate: 183 infant deaths per 1,000 live births
Life expectancy at birth: 39 years
GNP per capita: n.a.
Capital: Kabul

by Judy C. Felt

The Democratic Republic of Afghanistan, surrounded by the Soviet Union, Iran, Pakistan, and China, has an ancient and turbulent history. Often called the "crossroads of central Asia," the landlocked country (with the size and population density of Texas) lies on historic trade and invasion routes. This accident of geography has produced a unique ethnic and linguistic mixture of tribes whose allegiance is primarily to the lineage group.

The principal ethnic group, the Pushtus, make up 40 percent of the population. Afghan Persian (Dari) and Pushtu are the dominant languages. Approximately 98 percent of all Afghans are Moslem and the religion pervades all aspects of daily life.

A constitutional monarchy, established in 1931, was overthrown in a bloodless coup in 1973. In 1978, following a second coup, Afghanistan became a Marxist state, and the Soviet Union invaded the country in 1979. Political and religious opposition to the Marxist regime and the Soviet occupation have kept the country in a state of civil war since then, provoking the emigration of an estimated 5 million refugees – currently living in camps in bordering Pakistan and Iran. As a consequence, the population has fallen in the 1980s.

Afghanistan's fertility levels are estimated to be very high, and its mortality rates are probably among the highest in the world. Because of the mass emigration which occurred after 1980, however, it is one of the very, very few countries to experience a decline in population between 1980 and 1987 (West Germany is the most notable other such country; most of the others are island nations with small populations.) The extent and timing of the refugees' repatriation will in part determine the population dynamics for the next decade.

Afghanistan's economy is overwhelmingly agricultural. The land is dry and mountainous and half of the cultivated land must be irrigated. In 1979, an estimated 85 percent of the settled population lived in rural areas, using primitive farming techniques. Another estimated 2.5 million are nomads.

The government is committed to reducing mortality and morbidity. Afghanistan is one of the only countries in which female life expectancy is lower than male, largely because of the low status of women and female children, low levels of medical care, and high fertility. Contraceptives are available and the government is supportive, but family planning services (usually available through health clinics) are inadequate. It is estimated that less than 5 percent of married women of childbearing age are using contraception. Sterilization is illegal and abortion is allowed only to save the life of the mother.

Development needs and a long war burden Afghanistan's people

Sources of demographic data are scarce and current estimates are based on a 1972-1974 series of surveys and a 1979 Census which enumerated only 55 to 60 percent of the population. Data on registration of births and deaths are not available; fertility and mortality estimates are based on information available in the 1979 Census. Extrapolation based on these limited data sources produce estimates of undetermined and limited accuracy. The government recognizes the need for better data and has asked for international aid to upgrade data collection and analytic capability.

The USSR has announced it would withdraw its troops from Afghanistan starting May 15, and that all would be out by the new year. This policy change, while peaceable at first glance, still leaves many questions unclear: whether the withdrawal will bring peace between the Kabul government and the rebel factions or merely open a new chapter in the war; when the 5 million refugees outside the country will start to return; and what impact a massive return would have on Afghanistan.

Judy C. Felt is a research demographer at PRB

POPULATION TODAY

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Demographers way down yonder. (See page 3.)

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FROM THE EDITOR'S DESK

Hardly the most urgent population issue in the world, but remember the movie of *The Brothers Karamazov*? Made in 1958, this earnest adaptation of Dostoevsky starred such celluloid eminences as Yul Brynner (Dimitri), Lee J. Cobb (Old Man Karamazov), and – remember? – William Shatner as the saintly Alyosha.

They sure don't make 'em like that any more. Movies have changed from being a competitor of literature and stage drama to serving as a time-killing entertainment commodity – 90 minutes of action, 90 minutes of scares, etc., available for $1.99 at your local video store.

But take heart. As they inexorably age, baby boomers' tastes will grow up. Already they are turning from "Spielbergiana" to the more mature likes of *Fatal Attraction, No Way Out, The House on Carroll Street, Wall Street, Broadcast News*.

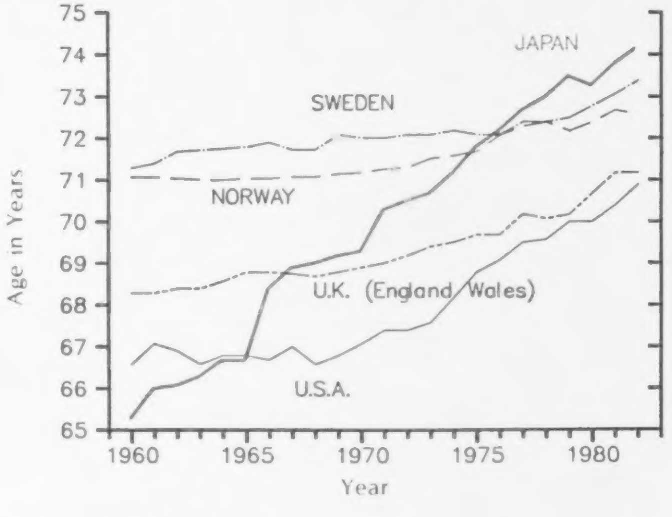
But a truly adult movie isn't one with "frank" and "explicit" themes. A truly adult movie is a movie whose screen credits are pages in a leatherbound volume, turned by an anonymous hand. It's a prestigious cultural event. It's good for you. It's Stodgy City.

Consequently, you'll know when the baby boomers have finally gotten old. It'll be the day Hollywood stops releasing fluff like *Police Academy* and instead produces, with great fanfare, a gala three-hour remake of *The Brothers Karamazov*. With, no doubt, Michael J. Fox as Alyosha and William Shatner as Old Man Karamazov.

– Art Haupt

SPEAKING GRAPHICALLY

Upward Trends in Life Expectancy, 1960-1982



The above graph shows increases in life expectancy at birth in selected more developed countries over three decades. Japan now has the highest life expectancy in the world – 75.2 for males and 80.9 for females, as of 1986. (The U.S. preliminary rates for 1986 were 71.3 and 78.3, respectively.) A major cause of this dramatic rise is believed to be a decline in cerebrovascular disease, the precise reason for which is still being studied.

Source: From "Changing Mortality Patterns Which Led Life Expectancy in Japan to Surpass Sweden: 1972-1982," by Machiko Yanagashita and Jack Guralnik, *Demography*, November 1988, in press. Reproduced by kind permission of *Demography*.

POPULATION TODAY

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PAAers Laissent Rouler les Bon Temps

Some 1,090 demographers and population specialists crowded into New Orleans April 21-23 for the annual meeting of the Population Association of America – the first PAA meeting to go South in a decade.

With its unique Spanish-French-Irish-Southern-Turkish (as in Turkish bath) atmosphere and charm, the Crescent City provided a most convivial venue for meeting and exchange. And, in fact, the weather during the meeting was mainly springlike and pleasant.

Perhaps because of the local ambiance, demographic life seemed more measured and slower than in the frenetic early 1980s – ready to, as the city's unofficial motto would have it, let the good times roll. The following should give some idea of the *bons temps* in the Hyatt Regency during those fateful days.

Premeetings

APLIC. This year's conference, with the focus "Health and Population Information as APLIC Comes of Age," marked the 21st meeting of APLIC International (the Association for Population/Family Planning Libraries and Information Centers-International).

Gerry Hendershot, William Pratt, and Harry Rosenberg – panel members from the National Center for Health Statistics (NCHS) session – reported on the types of data collected under the national vital statistics and mortality programs. The National Survey of Family Growth – a continual series started in 1955 which is now in its fourth cycle – has expanded from gathering information on currently married or ever-married women to never-married, sexually active women in an effort to obtain better information on teenagers and abortion.

Biomedical and behavioral research on AIDS was discussed by representatives from the National Institutes of Health (NIH): Jack Kalbere, Office of Disease Prevention and Gloria Kamenske, Center for Population Research.

Psychosocial Workshop. At this 16th PAA subgroup meeting, psychologists, psychiatrists, anthropologists, educators, health specialists, and even a few demographers gathered to explore the "headshrinking" aspects of family planning and related issues.

U.S. birth rates were reported up.

PRB's own Elaine Murphy reported on interviews with policymakers in Ghana and Turkey regarding their reactions to population materials produced in their own countries compared to those produced by outsiders.

Other presentations included the importance of the user's perspective in contraceptive services, which is vital to understanding discontinuation rates, and a fascinating look at how differences in perceptions of risk are related to whether users are presented information on contraceptive effectiveness in terms of success versus failure rates.

Sessions

Compulsory Fertility Control. The Transnational Family Research Institute's Henry David reported on a panel study that he had conducted in Czechoslovakia, whose government wants to raise national fertility. David had studied 110 boys and 110 girls born in 1961-1963; this group could be termed "unwanted" since their mothers had been denied access to abortions for the same pregnancy.

Although the group scored as well on intelligence tests, as did a control group of "wanted" children, a lower proportion of them completed secondary school and more experienced alcoholism problems later in life. As a consequence of the study, reported David, Czechoslovakia abandoned the system of abortion commissions, as did many other Eastern European countries – except Romania.

In Romania, the fetus is considered "socialist property" and a woman must have 5 children before asking for an abortion. In addition, female workers are denied vacations in state facilities if they refuse to submit to a monthly pregnancy test and taxes for childlessness are imposed.

Joan Kaufman (UNFPA) discussed family planning efforts in four rural Chinese counties. She said that fines for unauthorized childbearing are lightly administered so that, for example, some women have up to 14 months to pay. Noriko Tsuya (Nihon Univ.) and Minja Choe (East-West Center) reported that from 1982 to 1985, fertility in the rural areas of Jilin province dropped sharply; during this period, differentials in educational attainment and the sex of the first child virtually disappeared among couples receiving a one-child certificate.

Discussant Jason Finkle (Univ. of Michigan) raised several issues regarding past and possible future official policies on couples' rights to choose their family size. Some of the more extreme past efforts have backfired, particularly the Indian sterilization campaigns of the 1970s under Sanjay Gandhi which became in a sense a class struggle between upper-caste Hindus and lower-class Moslems. He also said that there has been no stronger critic of China's strict population policies than the Chinese press itself.

Population Policy. The two sessions on this topic complemented each other. The first presented a broad

Continued on page 6

Immigration Door Closes

When midnight finally came, ending Wednesday, May 4, 1988, approximately 2.1 million aliens illegally living in the U.S. had filed applications under the one-time, one-year-long immigration amnesty program.

The program offered legalized status to those who could prove they had been in the U.S. since Jan. 1, 1982 and had no major infectious diseases. In addition they had to pay filing fees of $185 per adult, $50 per child, or $420 per family of 3 or more.

Illegal residents don't want to be counted so no one knows how many there are, or how many of these may have qualified for amnesty. The INS predicted 2 million would apply when the Immigration Reform and Control Act (IRCA) of 1986 became law. Doris Meissner, former INS Acting Commissioner, and Demetrios Papademetriou of the Dept. of Labor estimate 1.8 to 2.6 million people were eligible. Guesswork figures for illegal aliens go up to 7 million but many of these would not be eligible under the legislation.

IRCA ran to some 100 pages, establishing five methods of legalization. A State Department Authorization Act passed on Dec. 22, 1987 offered the possibility for some illegal immigrants from Afghanistan, Ethiopia, Poland, and Uganda to become temporary resident aliens. The main legalization program, detailed above, permits LAWs (as legalization applicants are called) to become lawful temporary residents with work permits, and 18 months later to apply for permanent resident status after being tested for a knowledge of basic English and how the U.S. Government works. (Applications are still being processed; some 80 percent of those already processed were accepted.)

Permanent resident status, holding green cards, can lead to citizenship after five years. A legal temporary resident would revert to illegal status if an application is not made for permanent resident status; this would start in December 1988. Special Agricultural Workers – SAWs – can apply for temporary resident status until Nov. 30, 1988, having done farmwork in America for 90 days during the year ending May 1, 1986: temporary (90 days) work permits in the U.S. can be granted at a border port of entry. Some 450,000 farm workers have applied to date.

RAWs (Replenishment Agricultural Workers) will start in 1990. CHEs are Cuban-Haitian Entrants, usually Haitians, working with normal INS documentation between March 1987 and Nov. 5, 1988 without fees. Registry applicants fall under the Immigration and Nationality Act and apply to those here since January 1972.

The gap in numbers expected and numbers filed seems to be caused by fear (of the INS and deportation of some members of a family) and lack of money and/or time (for fees, medical checks including AIDS testing and X-rays, assistance, translating, photocopies, interviews with the INS) and/or documented proof of residence.

In Congress, the House voted an extension of amnesty to Nov. 30, 1988 but the Senate refused extension and President Reagan would reportedly have vetoed an extension. Applications leaped in number in April and the special Legalization Offices were open until midnight and on weekends for partial applications during the last weeks.

The vast majority of LAWs (and SAWs) are Mexican males who applied in California or Texas, where major programs explaining amnesty were run in English and Spanish. The New York City Legalization Office, on the other hand, processed people from 150 countries, and no one country accounted for more than 10 percent of the applications. New York's "top 10" were Haiti, the Dominican Republic, Mexico, Colombia, El Salvador, China, Pakistan, Ecuador, Jamaica, and India.

Undercounts

A comparison of LAW applications, legal immigrants from 1980 to 1982, and figures for illegal aliens in the 1980 Census developed by Robert Warren of INS and Jeffrey S. Passel of the U.S. Census Bureau show significant differences. Their residual approach found that that Census enumerated 2,050,000 illegal aliens. Some 49.8 percent of illegals resided in California, and Mexicans made up 55.0 percent of illegals. Yet, through Feb. 18, 1988, 57.6 percent of the LAW applications were filed in California, while Mexicans constituted 71.6 percent of applicants throughout the country.

Obviously, some illegal aliens have left the country, died, legalized themselves through other methods, etc. and some had "self-selected out" of the amnesty program. Although there truly were many Mexicans, and many aliens in California, the census undercount seems very "under." David North suggests that, for instance, the proportion of males in the legalization program population may be the correct one.

The amnesty program was in place from May 5, 1987 to May 4, 1988. An employer who knowingly hires any worker who cannot prove legal eligibility to work (work permits or other documents to fulfill requirements on an I-9 form) faces graduated civil and criminal penalties, which can rise to $10,000 per illegal employee and six months in prison. Aliens and residents working illegally are subject to revitalized arrest and deportation efforts. The special "open door" has now slammed shut.

– R.Y.

Call for Case Studies for *PT*

Population Today is looking for case studies demonstrating business applications of demography for future Demographer's Pages.

Such case studies would describe an actual demographic problem that a demographer was asked to adddress.

Examples of subjects might be: determining the demographics of a market area; identifying and estimating a demographic subgroup to pitch a product or service to; or using demographic analysis to pinpoint labor needs.

Demographer's Pages run about six double-spaced typed pages. Because demographic case studies tend to be rare and specialized, *PT* will pay a modest honorarium for each such study published.

Send submission or detailed proposal to:

Arthur Haupt, Editor
Population Today
Population Reference
Bureau, Inc.
777 14th St. N.W., Suite 800
Washington, D.C. 20005

SURVEY REPORT

El Salvador

As of 1985, El Salvadoran women averaged 4.4 children.

El Salvador appears to be entering a period of fertility decline, according to the final report of the 1985 National Family Planning Survey, a part of the Demographic and Health Survey project of Westinghouse's Institute for Resource Development. The survey of 5,200 women aged 15 to 49 also found that contraceptive use among married women has risen since the 1970s, from 34 to 47 percent. Several political districts were not surveyed because of civil unrest, but the resulting sample covered 75 to 80 percent of the Salvadoran population and may be considered fairly representative.

In the 1970s, the total fertility rate (TFR), or total number of lifetime births per women, in El Salvador exceeded 6 children per woman and the annual growth rate was 2.9 percent. In 1985, the survey results imply a TFR of 4.4 and a population growth rate of 1.1 percent. A temporary increase in mortality and heavy out-migration during the first half of the 1980s also contributed to the slowdown in growth. The internal disruption and violence which has plagued this Central American country for the past decade has also lowered life expectancy from 60 years to 57 years between the late 1970s and early 1980s, according to the report.

The 1985 survey recorded a dramatic decline in fertility in the rural parts of the country, which contain 57 percent of the population. The TFR for rural areas fell from 8.4 to 5.9 children, while the TFR in the capital, San Salvador, actually rose from 2.6 to 3.3 between 1978 and 1985. A heavy migration of rural families, who have a tradition of larger numbers of children, to the capital and other cities probably accounts for the increased fertility in the urban areas.

While fertility declined for all age groups of women, it fell most dramatically for women over 25, suggesting that married women have become adept at avoiding further pregnancies. About 63 percent of the married women said they did not want any more children, and 81 percent of the wives who already had 3 children did not want more.

The contraceptive choices of Salvadoran women reflect intentions to stop childbearing, but not necessarily to space births. Of the 47 percent of the married women surveyed who used contraceptives, nearly 70 percent were sterilized. Only 7 percent of married women used the pill, 3 percent the IUD, 3 percent followed a traditional method such as rhythm or withdrawal, and 3 percent used some other method.

The rate of sterilization has been fairly constant since 1978, at about 20 sterilizations per 1,000 women annually. The average age of a woman undergoing that operation is 28 years. The authors comment that the primary focus of family planning efforts in the 1970s was to stop childbearing for women who wanted no more children – hence the emphasis on sterilization. In the near future, however, they foresee greater attention paid to spacing births, and increased supply of more temporary birth control methods.

Estimates of infant mortality based on the survey showed that women from rural areas and with less education were more likely to have experienced the death of an infant. Not surprisingly, rural and less-educated women were less likely to have had prenatal medical care or to have had a physician or midwife present at birth. About 47 percent of the children under age 5 had vaccination cards, and a large majority of those had been vaccinated against the major childhood diseases. The findings demonstrate the success of large-scale vaccination campaigns in recent years in El Salvador.

Because it is an indicator of general child health, the survey asked mothers whether their children had diarrhea within the past 24 hours or past two weeks. Thirty-six percent of the children under 5 years of age had experienced a bout of diarrhea in the two weeks preceding the survey. The episodes were more frequent for children under 3 and for those with less educated mothers.

– M.K.

EMPLOYMENT
APPLICANTS
EMPLOYMENT
VACANCIES

One of 84 sessions; PAA President Reynolds Farley; the facts of population life.

PAAers in New Orleans

Continued from page 3

historical overview of donor activities in the population policy area. Thomas Goliber (Futures Group) pointed out that although the World Bank has not put much money into population activities, it does work in the policy arena by frequently requesting that a population policy be developed as a condition for granting structural adjustment loans. The Bank is beginning to place more emphasis on population programs and an increase in funding may be instituted.

The second session, which focused on individual country efforts (countries that have received donor funding, particularly from the U.S. Agency for International Development [AID]), highlighted how much policy change has taken place in sub-Saharan Africa. More and more countries in recent years have moved to develop and implement population policies.

Goliber noted that both sessions were surprisingly well attended. He felt that there was great interest in policy as well as in international topics in general and African subjects in particular (the earlier sub-Saharan Africa panel had a standing-room-only crowd).

AIDS. This year PAA saw three sessions devoted to the spread and implications of the AIDS epidemic, both in the U.S. and other countries, and concentrating on routes of transmission and rate of spread.

In the U.S., Marc Artzrouni (Clemson Univ.) described his model of AIDS transmission. Taking into account the decline in the cumulative incidence of AIDS presently being observed (the disease hasn't snowballed in the drastic way many had predicted) and incubation periods estimated from the disease's history, the model suggests that the HIV epidemic may have crested during 1983-1984. Reasons for subsequent decrease, if any, may include saturation of high-risk groups, lower transmission rates, and success in containment. But even with this hypothesis, Artzrouni believes that because of the large reservoir of people who are HIV-infected, the epidemic is likely to linger into the 21st century. By that time it will have caused some 300,000 deaths in the U.S. alone.

Aging in the Third World. Linda Martin (East-West Population Institute) reported that surveys of the elderly in four Asian countries show that the likelihood of living with one's children is higher for males but, surprisingly, is negatively associated with age. Donald Adamchak (Univ. of Zimbabwe and Kansas State Univ.) said that United Nations projections show that the elderly population of Zimbabwe would double both from 1980 to 2000 and from 2000 to 2020, but that the percentage of elderly will stay virtually the same.

Anthropologists are employed to double-check census results

World Census-Taking Trends. An overview of experience in sub-Saharan Africa prepared by John Crowley (AID) and Karen Hardee-Cleaveland (U.S. Census Bureau) was presented. Every country in the region save Chad has taken or attempted to take a modern census, and the installation of microcomputer systems has become a very cost-effective and efficient method of processing a census, particularly in a country of 7-10 million people.

Marcelo Orense (Philippine National Statistics Office) emphasized the importance to his government of achieving an accurate count in the upcoming 1990 Philippine Census, especially in light of the government's goal of slowing population growth. Susan Miskura (U.S. Census Bureau) reported that efforts to improve coverage in the 1990 U.S. Census will include drop-off and mail-back of census forms in rural areas and urban settings with unreliable mail delivery, earlier hiring of indigenous enumerators, and new procedures for counting the homeless.

Ward Kingkade (U.S. Census Bureau) expressed the hope that the Soviet Union's 1989 Census will, in the spirit of *glasnost*, result in more detailed published data. The Soviets are particularly concerned with the collection of labor force statistics, he said.

Lothar Herberger (West German Federal Statistical Office) could not attend due to an injured back, but the U.S. Census Bureau's Bill Butz, himself an authority on the German census, presented Herberger's paper. The most recent West German census was taken in May 1987 against a background of increasing resistance to national counts as a needless expense and invasion of privacy. First results from the 1987 Census are expected by November 1988 and 90 percent of the forms

DEMOGRAPHY
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A T-shirt escutcheon, Sneps Award winner Kenneth Wachter; a poster-session booth

have already been received in state offices.

One result of the West German confidentiality fuss is that no detailed data will be available on a national level, only finished summary tables provided by the German states. Eduardo Arriaga (U.S. Census Bureau) suggested that one solution may be to survey people to find out which questions annoy them and simply remove them. He also noted that, while most developing countries take censuses, few actually *use* them for detailed planning purposes and that delays of four to five years in the release of the data are not unusual.

Anthropological Demography. A paper by Catherine Hines (U.S. Census Bureau) discussed how the Census Bureau uses anthropologists to check census results in areas where there is likely to be an undercount.

The author maintains that the worth of these anthropological studies lies not in how much they can be generalized but in their usefulness in formulating and testing hypotheses to explain the undercount. From the perspective of those counted, the main motive for avoiding the census taker is economic. Women will usually answer the census taker's questions. In poor families, they may fear that any contact with "the government" in whatever guise could jeopardize their access to welfare benefits. Illegal immigrants certainly fear they or their male partner may be discovered and deported.

As for the enumerator's point of view, one study hypothesized that census takers unconsciously colluded with the undercount. Often they are residents of the locality or from similar family backgrounds and share, or at least understand, the residents' view of the world.

This kind of anthropological approach is continuing in further research for the 1990 Census dress rehearsal. The findings will *not* be used to adjust the count in any area but will hopefully be used to improve the count, i.e., to educate both census takers and those to be counted about the purpose of the census.

Women's Issues. Three sessions involved women's issues. One theme that emerged was contraceptive discontinuation rates, which have become a major concern for family-planning-service delivery specialists. Now that procedures for setting up large-scale family planning programs are well established, it is time, participants agreed, to focus on improving (or expanding) services not only for new clients but for continuous users.

U.S. women
have improved
economically,
but blacks have not

The reasons for high discontinuation stem from the quality of service (defined from the users' perspective) in all aspects of service delivery including mass media information, counseling, client-provider interaction, clinic organization/logistics, and follow-up. An awareness of the cultural setting, for example, husband-wife interaction or women's particular sensitivities, is vital but often neglected. The goal of family planning programs should not be defined on a macro-level, i.e., a lower crude birth rate, but should instead be to develop a clientele of satisfied users.

Children and Child Care. The problems of measuring the quality of various child care options, and the effects of child care on early childhood development were among the issues addressed. Researchers Sonalde Desai (Rand Corp.), Lindsay Chase-Lansdale (George Washington Univ.), and Robert T. Michael (Univ. of Chicago) found that a child's performance on a test of cognitive ability was not strongly related to whether he or she had a mother in the labor force, except for one group: Sons of more educated mothers did better if their mothers did not work outside the home.

The authors explained that because child care providers usually have low levels of education, these children received less intellectual stimulation from a baby-sitter than they would from their own well-educated mothers. The lack of stimulation apparently does not hold back the cognitive development of little girls, probably because they develop faster than boys. Both boys and girls with less-educated, lower-middle-class mothers are receiving about the same intellectual stimulation that they would from their own mothers.

In her award-winning paper (see "Awards and Address," page 8), Jane Mauldon (Rand Corp.) found "that where divorce detrimentally affects children's health, it does so through the loss in income and parental time that follow divorce," rather than extra stress associated with the family disruption.

Continued on next page

PAA glimpse: the Hyatt; Calvin Beale and Peter Morrison; immigrant labor on a New Orleans median strip.

PAAers New Orleans

Continued from preceding page

Microcomputers. The session on microcomputers in demography was less than well attended, in sharp contrast to previous years. Part of the reason speculated was the lack of new and innovative software added to the arsenal of research capabilities. The programs that were displayed were either known already or did not meet the application needs of most researchers.

A stern statement from the session chair, Albert Anderson (Univ. of Michigan), declared that PAA does not endorse programs. As it happened, there were few programs worthy of recommendation from any quarter. One exception shone through: Vivian Klaff's UDEMOG CAI System for teaching basic demography, which he uses at the Univ. of Delaware. Creating "slides" from Show Partner, a screen capturing program, he rearranges them as needed into lecture aids and teaching modules – an impressive example of interaction between computers and teaching.

Poster Session. This year saw an experimental poster session, in which the result of four research papers were presented by means of posters mounted on display boards at four booths, with handouts near at hand and the authors within arm's reach. This method of presentation has been used with success in other disciplines and offers advantages in communication efficiency over the traditional method (in which researchers read their papers to hushed throngs).

The visual displays varied in information density and in slickness; the abundance of handouts was helpful. As a medium, the poster booths were surprisingly reminiscent of booths at commercial trade shows, where the object is to get the gist of the display and grab the material before the sales rep has a chance to make eye contact. In point of fact, the PAA poster presenters were quite circumspect and courteous, but it may be a while before attendees master the rhythm of cruising the poster displays.

Awards and Address

Friday night was awards and address night. The Dorothy S. Thomas Award for best graduate student paper on migration or economic-demographic relations, introduced as the "Heisman Trophy" of demography, went to Jane Mauldon (Rand Corp.), for her paper "The Effects of Marital Disruption on Children's Health."

The Mindel C. Sheps Award for mathematical demography, given every other year for outstanding contribution to mathematical demography or demographic methodology, was presented to Kenneth Wachter (Univ. of California, Berkeley).

PAA President Reynolds Farley (Univ. of Michigan) directed his presidential address to the issue of "After the Starting Line – Blacks and Women in an Uphill Race."

The question Farley posed was: To what extent have or haven't these two major U.S. population groups improved their economic standing in the workplace? In particular, Farley considered and criticized four hypotheses that have been put forward in recent years to explain the continuation of massive black poverty: welfare problems; macroeconomic shifts; family breakdown and a culture of poverty; continuation of racial discrimination.

Looking at the statistics, Farley found women gaining in income during the past few decades, while blacks' progress has stultified. The picture remains complicated, however, with economic changes of the past decade depressing expected incomes for males in general, and with different metro areas and regions displaying widely varying racial differences in incidence of poverty.

Often ignored in the process of analyzing this situation were the demographic changes that have been simultaneously unfolding. Farley pointed out the great changes in how women decide how to spend their lives. These changes are even greater among black women, who are approaching economic equality with black males.

One consequence of this is that there may be less incentive for black women to marry or remain married. Farley speculated about whether a similar pattern might emerge in the event of reduced income differentials between white females and males.

Sidebars

Situated in the gigantic shadow of the Superdome, the Hyatt Regency constitutes part of the new New Orleans skyline, which erupted a few years ago when builders figured out how to support mega-story skyscrapers in the waterlogged mud on which the city basically rests. Like most other high-rise buildings along Poydras St., the utopian Hyatt could be in Anywhere U.S.A.

Other PAA memories: The spirited dancing Friday night to Cajun music. The "Past President" yellow ribbons that fluttered on many a lapel. The dreaded notes that session chairs of necessity passed up to many a paper reader ("2 More Minutes or Else ").

The Tenth Annual PAA Fun Run lost a certain *je ne sais quoi* this year when PAA's President, "Doctor Ren," failed to show at the 7 a.m. Saturday start, claiming "a meeting to go to." Nevertheless, *PT*'s intrepid reporter and 14 other stalwarts (an increase of 2 over the previous year) galloped off down the streets of New Orleans.

It was a fine morning for a run; those who lay slugabed missed a good time. The scene in the Quarter at this time was quite different from that just a few hours earlier: no swirling crowds, no raucous laughter, no jazz pouring from everywhere. The bars, praline shops, and T-shirt vendors were closed, or at least subdued. The runners kept together as they ran down Poydras from the hotel, turned on Carondelet and headed for the French Quarter. Deep into the Quarter along Bourbon Street they breezed, past appreciative bystanders and an encouraging taxi driver.

At Jackson Square and Saint Louis Cathedral the group turned toward the river, nimbly crossed the railroad tracks, climbed the levee, and stopped to behold the mighty Mississippi. Mist was rising from the water, partially concealing tugboats pushing barges upriver. Laughing Gulls ha-ha-ed from the sky, and the cross-river ferry gave a mighty TOOT! of encouragement to the runners.

After a few minutes of gazing at the scene, the group resumed their lope back to the hotel. Total distance covered: about three miles. Everyone arrived back in one piece, and warm good-byes were exchanged. It was clear that all were already looking forward to next year's 11th Anniversary Fun Run around the harbor, when PAA meets in Baltimore.

– compiled by Denise Dowdell, Robert Gardner, Carl Haub, Art Haupt, Mary Kent, David Lamphere, Thomas W. Merrick, Elaine Murphy, Nancy Yinger, Roberta Yared

SOFTWHERE

PEOPLE is a new, user-friendly software package for making population projections where there are several regions and/or subgroups to be projected separately.

PEOPLE allows you to sum the results of any combination of regions or subgroups up to 150 years into the future. Age groups and time periods can be five years or single years.

PEOPLE incorporates several analytical features which give the user considerable flexibility in specifying the types of input data. There are five options for fertility assumptions, three for mortality, and two for migration. However, subnational projections must be made with caution, owing to the vagaries of migration change.

PEOPLE was produced jointly by the Overseas Development Administration of the Government of the United Kingdom, the Economic Planning Unit of the Government of Malaysia, and the UNFPA/ILO.

The program runs on IBM and compatibles and needs at least 256K of memory. For information on PEOPLE please contact: Richard Leete, c/o British High Commission, Wisma Damansara, 50732 Kuala Lumpur, Malaysia.

– D.L.

POPULATION UPDATE

Estimated United States Population:

As of January 1, 1988	244,966,000
As of January 1, 1987	242,742,000

The above estimates, the latest available, include armed forces overseas and are from U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1020.

Estimated World Population:

As of June 1988	5,121,000,000
Annual growth	89,000,000

Estimated by extrapolation from the mid-1988 population on PRB's *World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: January 1988

	12 months ending with January					
	Number		Rate			
Item	1988	1987	1988	1987	1986	1985
Live births	3,812,000	3,728,000	15.7	15.5	15.7	15.6
Deaths	2,132,000	2,099,000	8.8	8.7	8.7	8.7
Natural increase	1,680,000	1,629,000	6.9	6.8	7.0	6.9
Marriages	2,407,000	2,397,000	9.9	9.9	10.2	10.5
Divorces	1,161,000	1,154,000	4.8	4.8	5.0	4.9
Infant deaths	38,000	38,600	10.0	10.4	10.6	10.7
Population base (in millions)			243.5	241.1	238.5	236.3

Note. Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source. Monthly Vital Statistics Report (Vol. 37, No. 1) from the National Center for Health Statistics.

TAKE A NUMBER

U.S. Hispanic Report Released: The Census Bureau has released a detailed report on the Hispanic population of the U.S. at mid-decade. By March of 1985, the population of civilian, noninstitutional Hispanics had increased to 16.9 million, up from 14.5 million during the 1980 Census. This represents an increase of just over 17 percent, compared to 4.4 percent for non-Hispanics.

The report is based upon the annual Current Population Survey and the numbers of Hispanics were adjusted to independent estimates of the population in order to lessen annual fluctuations in the survey estimates due to sampling variability. The survey results are evidence that there has been some improvement in the socioeconomic status of Hispanics. The proportion of Hispanics age 25 and over who had finished high school rose from 45 percent in 1982 to 48 in 1985; this did not, however, close the gap with non-Hispanics due to a parallel improvement in the others' educational attainment. Higher fertility is also in evidence among Hispanics. Hispanic women ages 35-44 reported an average 2,846 children ever born per 1,000 women, notably higher than the 2,158 for non-Hispanics. Hispanic income did lag behind that of non-Hispanic from 1981 to 1984. Median income for Hispanic families rose from $16,500 in 1981 to $18,800 in 1984, but inflation resulted in no increase in real income. Non-Hispanics, meanwhile, experienced a 3.5 percent increase in real income. Labor force participation rates for Hispanic women ages 16 and over increased from 48.0 percent in 1982 to 50.4 percent in 1985, but actually declined for males, from 80.5 percent to 78.5 percent. One troubling statistic from the survey: One-quarter of Hispanic families remained below the poverty line in 1985, a rate about two and one-half times that of non-Hispanics.

Here and There: the Hong Kong Family Planning Association reported that in 1987 the colony had one of the world's highest contraceptive prevalence rates, 81 percent of married women; health concerns have reduced use of the pill as a method. 35,000 temporary workers will be sent into the field by the U.S. Census Bureau to work on a master address list for the 1990 Census, primarily in nonmetropolitan areas. Trinidad and Tobago reports that 83 percent of its women have used a contraceptive method at some time and that 45 percent of the married women say that they want no more children. A detailed report on the 1987 survey will be released later this year.

–C.H.

Errata

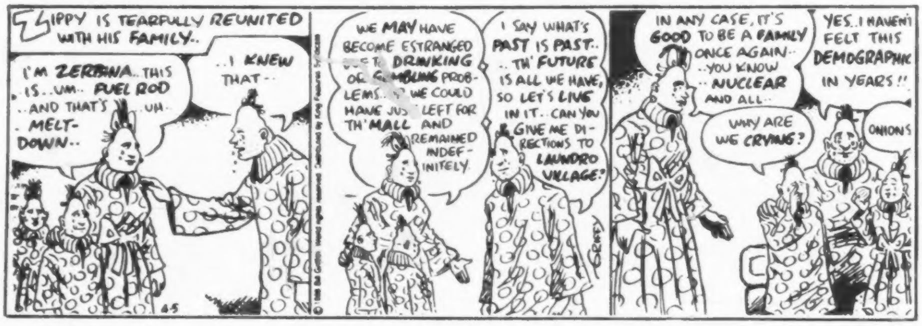
In the May 1988 issue of *PT*, there were two errata, both the result of mis-applied terms of quantity.

On page 2, in "Speaking Graphically," the regional population Y-axis scale for regional U.S. populations should have read "Millions."

On page 9, in the article "Worldwatch," a sentence misdescribed the level and growth rate of the Third World's external debt. This sentence should have read: "The external debt of the Third World is now over $1 *trillion* and increasing by some $60 billion a year."

ADDENDA

ZIPPY, by Bill Griffith


ZIPPY IS TEARFULLY REUNITED WITH HIS FAMILY..
I'M ZERBINA.. THIS IS.. UM.. FUEL ROD ..AND THAT'S ..UH.. . MELT-DOWN..
..I KNEW THAT--
WE MAY HAVE BECOME ESTRANGED DUE TO DRINKING OR GAMBLING PROBLEMS.. WE COULD HAVE JUST LEFT FOR TH' MALL AND REMAINED INDEFINITELY.
I SAY WHAT'S PAST IS PAST.. ..TH' FUTURE IS ALL WE HAVE, SO LET'S LIVE IN IT.. CAN YOU GIVE ME DIRECTIONS TO LAUNDRO VILLAGE?
IN ANY CASE, IT'S GOOD TO BE A FAMILY ONCE AGAIN.. ..YOU KNOW ..NUCLEAR AND ALL..
YES.. I HAVEN'T FELT THIS DEMOGRAPHIC IN YEARS!!
WHY ARE WE CRYING?
ONIONS
GRIFFY
4-5

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CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in Current Readings. Publishers may address review copies to Book Review Editor, POPULATION TODAY, Population Reference Bureau, 777 14th St., N.W., Washington, D.C. 20005.

WORLDWATCH magazine, edited by Lester R. Brown. (The Worldwatch Institute, 1776 Massachusetts Ave. N.W., Washington, D.C. 20077-6628). Subscription rate: $20/yr. for six issues, $5.00/single issue.

The Worldwatch Institute, known for its annual *State of the World* report and *Worldwatch Paper* series, has recently published the second issue of its glossy new magazine. Staff writers prepare feature articles which canvass a wide variety of global issues affecting our environmental resources, population, and development.

Topics thus far have included aquaculture, nuclear energy, abortion, oil-base farming, INF treaty implications, and wind power. Five regular departments: Promising Initiatives, Wrong Turns, Trends, Technological Advances, and Worth Reading cover noteworthy events and activities stateside and worldwide.

– Denise Dowdell

SOCIOLOGICAL FORUM, edited by Robin M. Williams, Jr. (Special Issue: Demography as an Interdiscipline edited by J. Mayone Stycos). (Cornell University, 352 Uris Hall, Ithaca, N.Y. 1483-7601). Varying subscription rates from $18.00-$50.00 for four issues/yr. Single issue, $10.00.

Now in its second year, this periodical is the official journal of the Eastern Sociological Society. Editorial emphasis is on integrative articles that link subfields of sociology or articulate sociological research with work in other disciplines. Demography was chosen for this special issue (Vol 2, No. 4) because of its interdisciplinary nature; e.g., it draws heavily on biology and sociology (fertility), economics and geography (migration), and on the health sciences (mortality analyses). Contributors include Jane Menken, Karen Oppenhein Mason, Samuel H. Preston, James Palmore, Larry Bumpass, and Susan Cotts Watkins. Kingsley Davis and Richard Easterlin provide two review essays on Cleland and Hobcraft's *Reproductive Change in Developing Countries* (1985) and Coale and Watkins' *The Decline of Fertility in Europe* (1985).

– D.D.

Books Received

ADJUSTMENT WITH A HUMAN FACE: Protecting the Vulnerable and Promoting Growth, Vol. 1 (A STUDY BY UNICEF), edited by Giovanni Andrea Cornia, Richard Jolly, and Frances Stewart. New York: Oxford, 1987. 319 pages. $45.00 cloth.

BUSINESS DEMOGRAPHY: A Guide and Reference for Business Planners and Marketers, by Louis G. Pol. Westport, Conn.: Quorum Books, 1987. 289 pages. $49.95 cloth.

THE COLOR LINE AND THE QUALITY OF LIFE IN AMERICA, by Reynolds Farley and Walter R. Allen. New York: Russell Sage Foundation, 1987. (A Census Monograph Series: The Population of the United States in the 1980s.) 493 pages. $37.00 cloth.

DOLLARS AND DREAMS: The Changing American Income Distribution, by Frank Levy. New York: Russell Sage Foundation, 1987. (A Census Monograph Series: The Population of the United States in the 1980s.) 259 pages. $27.50 cloth.

FAMILIES IN CANADA TODAY: Recent Changes and Their Policy Consequences, 2nd edition, by Margrit Eichler. Toronto, Canada: Gage Educational Publishing, 1988. 442 pages. $18.95 paper.

IMMIGRATION IN NEW YORK, by Elizabeth Bogen. New York: Praeger, 1987. 268 pages. $39.95 cloth.

INTERNATIONAL ORGANIZATIONS 1988 (Encyclopedia of Associations, Vol. 4), 22nd edition, edited by Karin E. Koek. Detroit, Michigan: Gale Research, 1988. 998 pages. $195.00 cloth.

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SPOTLIGHT

The Cajuns

by Carl Haub

While other ethnic groups in the U.S. receive frequent media attention, Cajuns reside in relative obscurity in their native territory. Within Louisiana, Cajuns have significantly shaped the state's cultural and economic history. Still, this interesting and colorful minority receives little attention elsewhere, except, most recently, on restaurant menus. A form of official recognition was granted, however, by the state legislature in 1968 with the creation of a 22-parish (county) region called "Acadiana."

At the New Orleans meeting of the Population Association of America, however, a session chaired by Frances J. Mather (Tulane Univ.) was devoted to the Cajuns. Who exactly are they? For one thing, they have little to do with the cuisine often credited to them in Northern restaurants. This mislabeling is understandable, giving the characteristic "melting pot" nature of Cajun society and its frequent confusion with the Creoles, who are descended from Spanish and French first families of the region. Diversity of origins is the norm among Cajuns, held together by their singular dialect based on archaic French mixed with English, German, Spanish, and African languages.

The earliest Cajuns were French and Germans who settled upriver from New Orleans in the early 18th Century. In 1755, French Acadians, expelled from Nova Scotia by the English, began to arrive and assimilated many Germans into their French culture, even with French versions of their names. The name "Cajun" derives from "Acadian." The fabric of Cajun society contains many groups – Iberians, West Indians, even Irish – each contributing in some way.

This unique blending, combined with a rugged lifestyle in the backwaters and bayous, resulted in a society with a true work-hard, play-hard ethic, a lifestyle reflected in the energetic vibrancy of Cajun music. Cajuns are well known for their open hospitality and their penchant for making routine work a thing to be enjoyed.

Cajun society continued relatively undisturbed until the advent of the Depression and the development of the oil and gas industry. In the 1930s and 1940s, many Cajuns migrated westward to the "Golden Triangle" area of Beaumont-Port Arthur-Orange, Texas to work in the oil and gas industry, where today Cajun French can still be heard.

Much of Cajun history can be traced through their music and native dishes. The music reflects the energy with which the Cajuns do everything – inexpensive fiddles accompanied by clarinets made from plentiful reeds were played loudly at a fast tempo. The accordion arrived from Germany about 1850, fitting in perfectly with the Cajun one-man-band motif and was rapidly adopted once musicians had figured out what to do with it.

A Western twang crept in during the 1930s and some elements of the blues, modern music, and a string band effect appeared to further dilute what was often called "Cajun music." Later on the music was exported to the rest of the world via the Newport Jazz Festival where it received a tumultuous welcome, much to the surprise of the musicians themselves. By the 1950s, a revival of traditional music began at the same time local politicians were beginning to mention Cajuns in their speeches.

Cajun food reflects the diet of poverty and expedience. Beans, rice, and tomatoes were the staples, sometimes spiced with a little red pepper. Since wheat would not grow well in the climate, the earliest arrivals learned about corn from the Indians and cornbread has long been featured, particularly in western Louisiana. Sassafras leaves (*filé*) were used to thicken gumbo – the state dish – a stew whose very name is the African word for "okra."

Little, of course, can be gathered about the Cajuns from census data since such a diverse ethnic group is difficult to define. Researchers put their numbers at about 1.5 million; the 1980 Census reported only about 250,000 persons who speak French at home, but the ability of this census question to estimate Cajuns is unknown. One feature of the population is that virtually all Cajuns above the age of 40 speak Cajun French while its use declines rapidly among those below 40.

– While little is known about Cajun vital statistics, perhaps something can be gleaned from this refrain from their music: "I plan to love hard and live to an old age."

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POPULATION TODAY

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JFK Library LOOK photo

U.S. population shifts affect presidential elections; see page 3. (Above: John F. Kennedy campaigns for President in 1960.)

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FROM THE EDITOR'S DESK

We live in the Information Age. Data availability is exceeding our wildest dreams, not to mention our ability to make use of it.

The Census Bureau published 300,000 pages of statistics from the 1980 Census, and offered 10 times that much data on computer tape. Personal computer hard drives can now hold hundreds of millions of bytes. With optical storage, billions and trillions of little datums may someday be cheaply stored on durable plastic platters. Even Jorge Luis Borges's ultimate "library," which reduced all human literature down to a single book (a book with an infinite number of pages) seems within the realm of possibility.

The ultimate compact data medium of all time, however, was waggishly described by A.K. Dewdney in the *Scientific American* a few years ago, crediting Martin Gardner. All human literature and records, after all, can be encoded as a *very* long string of numerical digits (e.g., 2908147216 ... etc., etc.). Dewdney modestly proposed placing a decimal point at the beginning of this string to produce a gargantuan fraction (0.2908147216 ... etc., etc.).

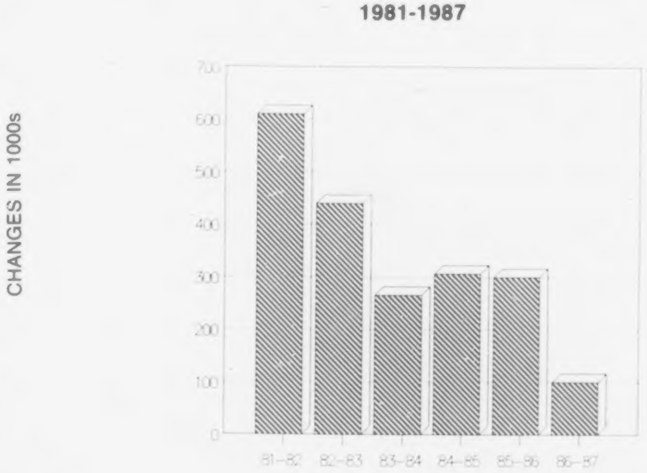
Now fashion a pristine metal rod composed of some (slightly hypothetical) perfect substance. Then inscribe a tiny nick upon that rod, situating the nick so that, viewed as marking a proportion of the rod's total length, it *precisely* corresponds to the fraction given above (0.2908147216 ...).

And there you have it. All human history, all human records, would thus be, in Dewdney's words, "reduced to a nick on a rod," a rod easily carried around on one's key chain. I'd be happy to explain further the technical details of writing to and reading from such a metal bar – but alas, I see I'm out of space.

– Art Haupt

SPEAKING GRAPHICALLY

Change in Texas Population



During the 1980s, Texas's population growth has faltered, owing to economic setbacks in the energy industry and a consequent exodus of out-migrants that has partially offset population increase due to fertility.

Source: U.S. Census Bureau, *Current Population Reports*, P-25, No. 1024

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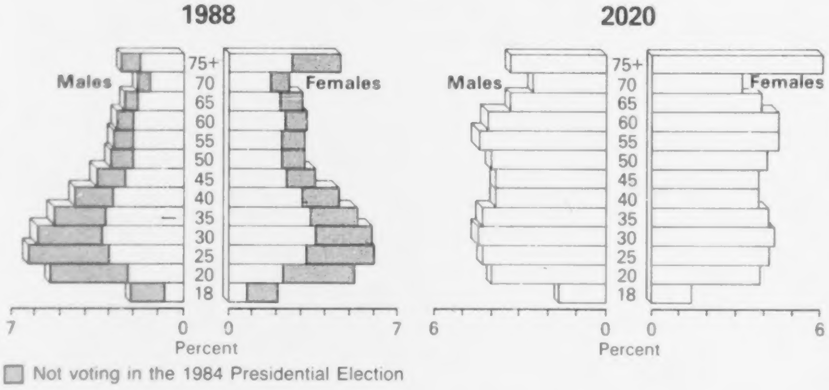
Politics and the U.S. Population

Voting Population by Age, 1988 and 2020



This summer's political conventions serve as a fresh reminder of how demography affects U.S. politics. In particular, two important "demo-political" events now loom on the national horizon: the Presidential election on Nov. 8 of this year and the 1991 reapportionment of the House of Representatives.

Not coincidentally, PRB has just published the seventh edition of the *U.S. Population Data Sheet*. Where people live does not necessarily compel them to vote a certain way, and the Data Sheet won't divine the next election. But with Data Sheet in hand, politicos – both amateur and professional – can get a better handle on the changing regional distribution of political power (i.e., voting-age population).

For example, how will the mushrooming growth of the Sun Belt be translated into votes? Fifty-four percent of the total Electoral College votes are now to be found in the South and West, the Data Sheet shows. As recently as 1956, these two sunny regions held only 45 percent.

The South turns out to be the least represented region of the country – its electors each represent the Presidential preference of about 356,000 voters, while the "overrepresented" Midwest's electors represent only 321,000 apiece. Thus, taking the regions as a whole, a Presidential vote cast in the Midwest ends up having 11 percent more clout in the Electoral College than a vote cast in the South. (The electorate/elector ratio for the Northeast is about 340,000 voters per elector; the rate for the West is about 336,000.)

A principal reason for this anomaly: the increase in population the South has experienced since the 1980 Census. It has grown by 11 percent during the 1980s, while the Midwest has grown by 4 percent. When reapportionment was completed in 1981, the South's Electoral College clout per voter was closer to the national average than it is today.

The West grew even faster than the South during the 1980s – a total of 15 percent. But it has not outgrown its Electoral College allotment so much because Western states on average have only three-quarters the population size of their fellow states elsewhere. Thus the region benefits from the bias toward small states built into the Electoral College. (A hypothetical state with a population of one person would still be entitled to three electoral votes.) The West started out the 1980s electorally as the most favored region of all; its growth since then has simply brought its electoral clout back toward the national average.

(The constitutionally mandated Electoral College that ultimately chooses a President is composed of 538 electors; each state is represented by electors equal in number to the sum of the state's senators and representatives [in 1961 the 23rd amendment to the Constitution granted three electors to the previously voteless District of Columbia].)

Keeping House

Population issues have always been of political concern, going back to the beginning of the American republic. The creation of a bicameral legislature and the overrepresentation of the less populous states in the Electoral College were attempts by the nation's founders to strike an equitable balance between the large and small states.

To keep the House in line with state population changes, the Constitution mandates periodic reapportionment of the House (hence the decennial census).* The new Data Sheet shows the projected state winners and losers in the 1990 reapportionment. Winners: California (which will pick up 5 representatives); Texas (plus 4); Florida (plus 3); Arizona and Georgia (each, plus 2); and North Carolina and Virginia (each plus 1). Since the House must remain at 435 seats no matter what the population, the corresponding losers will be New York and Pennsylvania (minus 3 seats each), Illinois, Michigan, and Ohio (minus 2). Losing a single seat will be Kansas, Iowa, Massachusetts, Montana, Wisconsin, and West Virginia. (With 1 seat snatched away, Montana loses half its congressional delegation.)

California, of course, is used to taking congressional seats away from other states. Each reapportionment since 1910 has assigned multiple new seats to the Golden State. (California's House delegation has grown every decade from 11 [1910] to 20 [1930] to 23 [1940] to 30 [1950] to 38 [1960] to 43

Continued on next page

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*Reapportionment is determined by a precise mathematical formula – the method of equal proportions – agreed to by statute in 1941. The method is described by Dudley Poston and Marion Tolbert Coleman in *Intercom*, January 1981, page 8.

New U.S. Data Sheet

Continued from preceding page

[1970] to 45 [1980] to 50 [1990, projected]; there was no reapportionment in 1920).

Other Data Sheet Highlights

- As of mid-1987 the U.S. population (residents and members of the armed forces overseas) had reached 243,400,000. The quarter-billion mark is likely to be reached by 1990.
- The country has grown by 16.9 million since 1980. Some 89 percent of that gain occurred in the South and West. The Northeast and Midwest have grown by less than 2 million during the 1980s. As a result, the U.S. population continues to shift heliotropically toward warm weather and sunshine:

Region	Increase	Region's percentage of U.S. pop. 1980	1987
Northeast	1.1 million	21.7	20.7
South	8.5 million	33.3	34.5
Midwest	0.7 million	26.0	24.5
West	6.5 million	19.1	20.4

- The Sun Belt states continue to be the fastest growing. Fifty-two percent of all 1988 population growth occurred in just three states: California, Texas, and Florida. These three states were also the destination for 64 percent of people migrating from state to state.
- Baby boomers aren't the only voters. While the baby boom cohorts are the sizable result of post-World War II fertility, their voter participation rates are lower than their elders', as a Data Sheet graphic reveals. Indeed, participation rates increase along with age, from 42 percent at 18-19 years to, say, 71 percent at 70-74 years. Thus, while those at 20-24 outnumber those at 50-54 by 1.8 to 1, as voters they barely outvote the latter.

—A.H.

PRB members receive their copies of the *U.S. Data Sheet* (seventh edition) in the same mailing as this *Population Today*. Additional copies of the Data Sheet can be ordered from the Population Reference Bureau, Inc., Circulation Dept., P.O. Box 96152, Washington, D.C. 20090-6152, with checks payable to PRB. Prices are $2.00 ea.; 2-10 copies $1.75 ea.; 11-50 $1.50 ea.; over 50, $1.25 ea. Orders for $50 or less must be prepaid and include $1.00 for postage and handling.

WASHINGTON WATCH

This issue of Population Today *inaugurates a new column, Washington Watch, which will periodically focus on government activities of interest to the population community.*

Congressional activity during the remainder of 1988 will primarily focus on negotiating appropriation levels for the various federal programs. In what will probably be a short legislative session, interrupted by political conventions, campaigns, and elections, Congress is working to agree on appropriation bills for Fiscal Year 1989 before FY 1988 comes to an end Sept. 30.

International Population Assistance

At the end of May the Foreign Aid Appropriation Bill was overwhelmingly passed by the House of Representatives. This bill provides funding for military assistance as well as development and for population and health, food, and nutrition programs. Of the $14.3 billion appropriated, $198 million is for International Population Assistance Programs.

Additionally, the bill continues a special Africa Fund initiative of $500 million. However, nothing in this year's fund is earmarked for family planning. The Agency for International Development indicates that it will allocate approximately $34 million of that fund for voluntary family planning services in Africa.

Two development assistance programs will receive increased appropriations for FY 1989: The Child Survival Fund and the International AIDS Program. Child Survival will receive $71 million of which $10 million will be allocated to support birth spacing projects. In addition, the Child Survival Fund is expected to receive an additional $29 million from the Africa Fund, for a total appropriation of about $100 million, or $25 million above current levels. Under this bill, the AIDS Prevention and Control Program will receive $35 million, an increase of $5 million from FY 1988. Half of this $35 million is to be the U.S. contribution to the World Health Organization's program on AIDS.

Funding for Demographic Research

The major source of funding for demographic research is the National Institutes of Health (NIH), particularly NIH's National Institute of Child Health and Human Development (NICHD) and the National Institute of Aging (NIA). The appropriations for the institutes not only fund competing and noncompeting grants but also the Population Resource Center, which provides the infrastructure to conduct and coordinate this research. NICHD's appropriation for FY 1988 is $397 million. For FY 1989, the President has requested $418 million, but even this level would mean cuts in the number of research centers and additional cuts in the current research program.

The President's budget request would have a similar impact on the National Institute of Aging. The FY 1988 appropriation level is $194 million. For FY 1989, the present budget request of $205 million would nevertheless result in a reduction in the number of competing grants. The Population Association of America has presented testimony before the House and Senate Appropriations Subcommittees indicating that in order to support the full research agenda at both these institutes, Congress should consider an increase over the President's FY 1989 budget request for both.

1990 Census

After months of discussion, the Census Bureau and the Office of Management and Budget have finally agreed on the sample size of the 1990 Census. Whether Congress's concerns have been fully satisfied remains to be seen.

Last year, the Office of Management

Continued on page 9

Hard Times for Rural U.S. During 1980s

VISTA ACTION photo

Rural America – which is home to one-quarter of the U.S. population – is in economic trouble.

Demographic and socioeconomic shifts over the past decade have caused a dramatic increase in poverty there. These changes have had a particular impact on young families and children, so that a quarter of all children in rural America were living in poverty, as of 1986. According to *The Rise of Poverty in Rural America*, a new PRB Trends Paper by demographer William P. O'Hare, "The most recent data indicate that the poverty rate in rural America [18 percent] is the same as that found in America's central cities."

The rural areas of the U.S. have traditionally been poorer than their urban counterparts, but in the 1970s, the poverty rates of the two were both on the downslope and heading toward convergence. Along with new prosperity, rural America also enjoyed a slight net in-migration, a remarkable reversal of a consistent rural-to-urban population shift that was probably as old as the nation itself.

But rural America was hit hard by the recession of the early 1980s, and many rural-based industries have deteriorated. The result has been increased poverty rates and renewed out-migration to urban areas. The poor who remain in the rural areas, moreover, are not receiving the benefits of welfare and other assistance programs to the same extent

Continued on page 8

SURVEY REPORT

Mali

UN Photo

Malian mother and child

Lack of information about family planning is the major obstacle to contraceptive use by Malian women, according to preliminary results of Mali's 1987 Demographic and Health Survey of 3,200 women 15 to 49 and 971 men aged 20 to 55.

Mali's 8.7 million inhabitants are largely rural, illiterate, and poor. Seventy-three percent of the survey respondents were rural and less than 7 percent of the women and 20 percent of the men could read. Over 90 percent of the population of this West African country is Moslem.

The survey confirmed the continuation of Mali's high fertility rate, with an average of 7.1 children per woman and indicated no change in that level during the past 35 years. Malian women prefer large families. Only 17 percent said that they wanted to stop childbearing; 33 percent said they would like to wait at least two years before becoming pregnant. While older women were more likely to want to avoid further pregnancies, a surprising 25 percent of women 45 to 49 said they wanted another child within two years.

About half of the women expressed a desire to control their fertility, but only 5 percent of the married women practiced family planning. Abstinence was the most commonly used method, the pill the second most popular. "Gris-gris," folk methods invoking magic used by under 1 percent of the married women, are the third most popular method.

The low contraceptive use is explained by the low level of family planning knowledge. Only 43 percent of the women were familiar with a family planning method; 29 percent, with a modern method. The link between education and contraceptive use was clearly demonstrated; current contraceptive use increased from 3 percent for those with no education to 13 percent for those with primary school education, up to 53 percent for the tiny minority of women with secondary or higher education.

The women said that lack of information and the desire to become pregnant were the main reasons they were not using family planning. Religion and opposition by a spouse, considered major obstacles to family planning in many Moslem countries, were cited by only 7 and 9 percent, respectively, of the female respondents.

Among the men interviewed, 66 percent were familiar with a contraceptive method, and 4 percent said they were currently using one, primarily rhythm and abstinence. While the lack of information was the largest single reason men, like the women, were not using birth control, 23 percent cited religious objections, the second most important reason.

Urban women were also much more likely to have had prenatal medical care and to have been attended by a medically trained assistant during their last childbirth.

– M.K.

DEMOGRAPHER'S PAGE

Using Brass P/F Adjustments in Estimates of Indonesian Fertility

by Terence H. Hull

This article is reprinted by permission from Research Note, Number 89, published in 1988 by the International Population Dynamics Program of the Dept. of Demography, The Australian National University.

According to the United Nations' Manual X (*Indirect Techniques for Demographic Estimation*),[1] the first publication of fertility adjustment factors based on the comparison of recent fertility reports and cumulative children ever born was in the early 1960s, when William Brass proposed a technique for the estimation of African fertility.[2]

This was a major breakthrough in demographic analysis because it allowed more confidence to be placed in the fertility rates derived from censuses and surveys which were known to contain a wide variety of reporting errors. In the absence of accurate vital registration, the Brass methods, as they came to be known, provided some of the first valid estimates of fertility in countries where fertility was previously known simply to be high.[3]

The heart of the method is:

> the adjustment of the age pattern of fertility derived from information on recent births by the level of fertility implied by the average parity of women in age groups 20-24, 25-29, and perhaps 30-34.[4]

The reasoning behind the adjustment is that the information given by women about births in the 12 months preceding the survey might be distorted due to the inability of respondents to accurately report on births in terms of an arbitrary calendar point, while older women might omit to report all the children they have given birth to because the children are long dead, or have left home, or the women simply do not understand the question.

The method assumes that the relatively young women would have given accurate responses to the number of children ever born, and that these can be used to correct the inaccuracies of reported fertility in the last year. It uses the ratio of parity (children ever born or P) in each five-year age group to cumulative parity equivalents of the current fertility schedule (F) as the factor for the adjustment, hence the name P/F Ratio Method.

Since the original formulation of the method, many refinements and variations have been developed. The most important of these are described in detail in Manual X.[5]

Has Indonesian fertility decline stalled or are estimates off track?

Fertility in Indonesia

In discussions of fertility in Indonesia it has sometimes been suggested[6,7] that P/F adjustments for that country should be applied to the Last Birth results, in order to obtain "more accurate" estimates of fertility.

The reasons against such a procedure are as follows:

1. The original P/F ratio method assumes that fertility has been constant. All evidence in Indonesia shows a major and growing fertility decline since the 1960s.

2. The modification of the P/F method to take account of declining fertility requires data not readily available in Indonesia.

3. The key assumption that mothers misreport the number of births in the last 12 months is irrelevant since the Last Birth estimates rely on the reported date of the most recent birth, and generally use the reports of births in the last nine or 10 months, adjusting these upwards to obtain an annual fertility rate. Indonesian women who have given birth in the last year are very likely to know the month of that birth, although there is some suspicion that interviewers fail to ask the question.

4. While older Indonesian women show lower reported parity than that implied by current fertility, there is substantial evidence that fertility was lower in the 1940s than the 1950s and 1960s.

Although not convinced that the basic data of the Last Birth calculations in 1975, 1980, and 1985 were perfectly accurate, we found little basis on which to think that they were anywhere near as inaccurate as the African data which inspired the development of the P/F technique, and we were certain that the evident decline in fertility would violate the basic assumption of the method: constant fertility in the recent past. For this reason the Last Birth estimates have been presented without P/F adjustments. The total fertility rate (TFR) estimates based on both the Last Birth and Own-Child Methods are shown in Table 1.

It is evident that the two methods are consistent, with both showing fertility declining at an increasing pace. The estimate of a TFR of 3.26 (or 3.3) for 1985 was greeted with enthusiasm by workers in the family planning program, as evidence of the success of their efforts. Analysts in the Central Bureau of Statistics were more cautious, and rather than accepting the Last Birth results, have chosen to extrapolate Own-Child figures (using constant rates of decline from earlier periods), to give a figure for 1985 of 3.66.[8]

The recent announcement by the

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Pacific Studies, The Australian National University

Table 1: Total Fertility Rate Estimates for Indonesia Based on Last Birth and Own-Child Methods

Year	Last Birth	Own-child
1967-70		5.61
1971-75		5.20
1975	4.9	
1976-79		4.7
1980	4.27	
1980-84		4.06
1985	3.26	

Minister for Population and Environment that the 1987 Indonesian Prevalence Survey (IPS) had produced a TFR of 3.6 raises a number of questions, whether compared with the Last Birth result for 1985, or the extrapolation of the Own Child result.[9]

Has Indonesian fertility decline stalled? If so, why, when the recorded prevalence of contraceptive use is still climbing? Or have both the Last Birth and Own-Child approaches to estimation been completely off the track? Whether a behavioral change or a technical failure, the questions are serious and difficult.

When we learn that the 1987 results have been adjusted using P/F ratios, the answers to these questions become a little more clear. Since, under conditions of falling fertility, the conventional P/F adjustment would overestimate fertility, we can assume that the 3.6 figure for 1987 should be reduced somewhat. Since the full calculation has not been released, it is impossible to say just how much of a reduction might be involved. Some idea of the potential magnitude of the adjustment can be gained by considering what the TFR for 1985 would have been had the P/F adjustment been applied then. Instead of the 3.26 we calculated, the TFR would have been 3.66, or slightly higher than the preliminary figure for 1987.

It bears repeating that the reason we rejected the use of P/F adjustments in 1985 continues to be valid in 1987, and the Indonesian Prevalence Survey has thus gone off the track in the fertility estimate. The implications of this are far-reaching, affecting the estimates of population growth rates and projections, and through these, planning for various development projects.

Discussion

What should be done now? Initially, the most important priority is to obtain enough data from the IPS to calculate a range of fertility estimates using Last Birth, Own-Child, and other methods which are robust in the face of declining fertility. This will also entail analysis of changing marriage patterns, to investigate the internal logic of apparent fertility changes in terms of marital fertility rates and the changing proportions of women who are currently married. Next, attempts should be made to analyze apparent trends of fertility in large provinces or major islands. Finally, the Bongaarts equations should be applied to investigate the compatibility of the fertility and contraceptive use estimates.

Policymakers need
deeper understanding
of actual
fertility trends

In the long run, though, the IPS should consider measures to improve the reliability and accuracy of the Last Birth estimates of fertility. Attention should be given to improving question design and interviewer training to raise the accuracy of reported month of birth in the preceding two years. Internal checks should be built into the question to ensure that all women reporting a positive number of children ever born also have a date for the last birth. Finally, detailed analyses should be made of the sex ratios and relative numbers of births by month over the preceding 12 to 15 months.

The Last Birth approach is not perfect, but it can be improved through reforms to the data collection procedures at the Central Bureau of Statistics. In the meantime, the application of standard P/F adjustments will not improve fertility estimates; on the contrary, errors will be compounded. Moreover, such results will spawn false debates on Indonesian fertility at a time when planners and policymakers looking to the next five-year plan are in need of deeper understanding of actual fertility trends, and clearer appreciation of the real shortcomings that continue to bedevil Indonesian demographic data.

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PRB Survey

"More maps."

"A comprehensive annual index."

"Computer software."

These are some of the most frequently expressed comments contributed by PRB members who responded to the recent Readership Survey.

PRB is currently conducting a review of its membership services and methods of disseminating population information to the public.

The information will become the basis of significant changes in PRB publications to be implemented during the next six months. The Readership Survey taken over the past eight months was part of this review. While many members wrote, "I'm happy with the publications. Keep up the good work," a number of suggestions called for adding to or modifying already existing publications.

One change will be in members' hands shortly: a one-page discussion guide with questions which will appear at the end of each *Bulletin* from now on. Such a guide was requested by almost half of the college professors who responded to the survey, and will be written for college-level audiences.

Another new material text requested by the vast majority of high school teachers is a data sheet workbook to accompany the annually published *World Population Data Sheet*, which appears each spring. The new workbook will be used by high school students, and will contain an 8½ × 11 inch version of the Data Sheet and questions and answers at several levels.

Population education materials will be changed modestly so as to serve both the PRB membership made up primarily of college-level teachers, and the population education audience.

Population Education Interchange and the *Population Learning Series* will be consolidated into one series for members. Each year they will receive one resource guide, such as the guide to population education software or audiovisual materials, and two teaching tools such as the data sheet workbook, or a student chartbook or reading.

Each teaching tool is to include a teacher's page. Efforts will be made to make the teaching tools more appropriate to the intended audience. Some will be strictly at the secondary level; others at the college level.

In response to requests for materials that will photocopy well, future population education publications will be designed and printed in such a way that they are completely legible when reproduced. This was done in the recently published student chartbook on U.S. population trends. Graphics appearing in other future PRB publications will also be prepared with an eye towards legible photocopying.

To help readers to locate a particular PRB article or issue, an annual comprehensive index of all PRB publications will debut in the December *Population Today*. The index will also contain a listing of the publications sent to PRB members during the current year.

Finally, some good news and some bad news for those members clamoring for maps and software. Yes – maps will be inserted in PRB publications wherever possible and appropriate. But no – PRB will not be developing software. However, *PT* and the Population Education department will continue to keep members informed of high quality population software. And the *World Population Data Sheet* will continue to be available on diskette in Lotus 1-2-3 (ver. 2.01) format, for $10.

– Patricia Cancellier

Hard Times

Continued from page 5

as their urban counterparts. How to improve their situation, and that of the rural economy, remains a challenge to policymakers that is not likely to be solved soon, according to O'Hare, who is Director of Policy Studies at PRB.

– A.H.

Copies of *The Rise of Poverty in Rural America*, by William P. O'Hare, are available for $3.00 per single copy; 2-10 copies, $2.30 each, 11-50 copies, $1.90 each, 51 or more, $1.50 each. Orders of $50 or less must be prepaid and include $1.00 for postage and handling. Send order and remittance to Population Reference Bureau, Inc., Circulation Dept., P.O. Box 96152, Washington, D.C. 20090-6152. Make checks payable to PRB.

Quebec's New Birth Bonuses

Birth	Allowance (in Canadian dollars)
First child	$ 500
Second child	500
Third child or more	3,000

This is the payment schedule for the Province of Quebec's new birth allowances to parents upon the birth of a new child. The allowance was instituted by the provincial government in May 1988 "to promote the family in Quebec."

Eligible families are those with children born or adopted on or after May 1, 1988. The program is specifically targeted at Quebec residents, who must be Canadian citizens or landed immigrants.

The allowance is explicitly a cash bonus for having children. It is paid automatically to qualified recipients in eight installments over two years. Payments are tax-exempt. Other pronatalist benefits announced at the same time by the provincial government: income-tax cuts and interest-free home loans for parents.

Besides its new birth bonus, Quebec also pays monthly child allowances until age 6 ($500 a year for third births and above, less for first and second births). The provincial government estimates that the cost of such support will reach $772 million in 1989. All this is in addition to the traditional monthly child allowance that the Canadian national government pays to parents.

With a 1988 population of 6.6 million, Quebec is Canada's second most populous province, after Ontario, and contains about 26 percent of the national population. The province is overwhelmingly French in origin and includes over 80 percent of Canada's French speakers. A strong sense of cultural heritage has fostered contention between French and English groups in Canada – an officially bilingual country. This contention culminated in the French-Quebec-separatist movement, and while a pro-separation proposition was defeated on the ballot in 1981, the issue remains very much alive.

One manifestation of this contention has been rising concern about Quebec's falling fertility. The province recorded a total fertility rate of (TFR) 3.7 lifetime children average per woman as recently as 1958. But a trend toward low fertility accompanied massive social and economic changes in the province during the 1950s when Quebec made a transition from a largely agricultural economy to an industrialized one.

As of 1988, Quebec not only has the country's lowest TFR – 1.4 – but is experiencing significant out-migration to other provinces, due in part to economic problems.

Will Quebec's cash incentives for births succeed? If the experience of other countries such as Czechoslovakia and Romania is any indication, incentives seem to successfully induce a short-term "bump" upward in fertility. After that, however, fertility tends to regress to former levels, and the impact of incentives diminishes. *– A.H.*

Washington Watch

Continued from page 4

and Budget had ordered a number of deletions in the 1990 Census questionnaire; a shift in the questions from the short to the long form and also a significant reduction in the sample size (see *PT*, November 1987). Constituents ranging from housing advocates to researchers protested the changes. The final compromise restored most of the questions proposed for elimination, moving some questions back to the short form. The sample size was also restored to the 1980 level of 16-17 million households. While this is proportionally a smaller number, The census Bureau reportedly feels it is adequate to obtain data for small subpopulations.

– Nancy McConnell

Nancy McConnell is director of the Washington, D.C., office of the Population Resource Center. The Center monitors legislative issues of concern to the Population Association of America. Neither the Center nor the Association advocates any particular population policy but works to protect funding for quality demographic research.

SOFTWHERE

PC-Globe is a commercially available mapping and database program that puts an atlas and encyclopedia on your desk. Colorful maps of six continents and 177 individual countries are displayed with their principal cities, population density and elevation. Further, PC-Globe contains information on each country, including national population, age distribution, major cities, time zones, health statistics, imports and exports, major industries, political parties, balance of trade statistics, world data and commodity rankings, and much more.

PC-Globe was developed by a team of educators for instruction to elementary to high school students, as well as home use.

Coming in August 1988 is PC-USA, a similar mapping and database covering the United States. The programs run on IBM or compatible computers, and come with six diskettes. Required are two drives, DOS 2.0 or higher, 256K and a color adapter board and $59.95 plus $4 for shipping.

Both PC-GLOBE and PC-USA will be using data from PRB's 1988 *World Population Data Sheet* and *Metro-USA Data Sheet* (PRB provided those data to the developer gratis.) For more information contact: Comwell Systems 2100 S. Rural Rd., Tempe, Ariz. 85852.

– D.L.

POPULATION UPDATE

Estimated United States Population:

As of March 1, 1988	245,385,000
As of March 1, 1987	243,153,000

The above estimates, the latest available, include armed forces overseas and are from U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1025.

Estimated World Population:

As of July 1988	5,128,000,000
Annual growth	89,000,000

Estimated by extrapolation from the mid-1988 population on PRB's *World Population Data Sheet.*

Latest Provisional Statistics for the U.S.: February 1988

	12 months ending with February					
	Number		Rate			
Item	1988	1987	1988	1987	1986	1985
Live births	3,818,000	3,732,000	15.7	15.5	15.7	15.6
Deaths	2,149,000	2,096,000	8.8	8.7	8.7	8.8
Natural increase	1,669,000	1,639,000	6.9	6.8	7.0	6.8
Marriages	2,397,000	2,383,000	9.8	9.9	10.2	10.4
Divorces	1,161,000	1,155,000	4.8	4.8	5.0	4.9
Infant deaths	38,200	38,600	10.0	10.4	10.5	10.7
Population base (in millions)			243.7	241.4	238.7	236.5

Note. Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source. *Monthly Vital Statistics Report* (Vol. 37, No. 2) from the National Center for Health Statistics.

TAKE A NUMBER

Childbearing, U.S.A.: After several pronounced fluctuations in this century, is it possible that U.S. fertility has reached a level where it may stabilize for the foreseeable future?

While there is likely to be a diversity of opinion on this issue, the evidence in hand suggests that this just may be the case. Recent years have seen much speculation on just how low the U.S. birth rate would go. As low as the rates in much of Europe, 1.3 to 1.6 children per woman?

Since 1977, the U.S. total fertility rate (TFR) has averaged 1.8 children per woman. The low point in American childbearing, occurred in the nation's Bicentennial year, 1976, the only year in which the TFR was as low as 1.7. In 1987, however, the TFR finally became unstuck from its decade-long 1.8 value, and, the provisional TFR of 1.88 actually rounded to 1.9. Does this suggest a new "baby boom?"

Judging by the Census Bureau's annual report on birth expectations, it does not. The Bureau's Current Population Survey for March 1987 indicates that American women still expect to have about 2.0 to 2.1 children during their lifetimes, a value which has changed little since 1979. Thus, it would appear that the U.S., following the pattern previously observed in most other developed countries, may have seen its fertility stabilize at a comparatively low level, but not as low as the "birth dearth" countries in Europe.

Meanwhile, North of the Border: The decline in the Canadian TFR to a lower level, 1.7, has rekindled that country's perennial population debate about growth, fertility, and immigration. A Statistics Canada report issued in late 1987 had noted that a continued TFR of 1.7 would require an annual immigration level of 275,000 by the turn of the century if an annual growth rate of 1 percent were to be maintained. If the TFR were to drop to 1.4, immigration would have to be increased to 325,000. The presumption of a growth rate of 1 percent is a fundamental tenet of the debated policies, one which apparently seems unquestioned. The likely diversification of Canadian society has stirred far more press discussion. All in all, it's an interesting case of a country grappling with fertility decline and its consequences. (Taken from *Demography and Immigration in Canada: Challenge and Opportunity*, Canada Employment and Immigration Commission, November 1987)

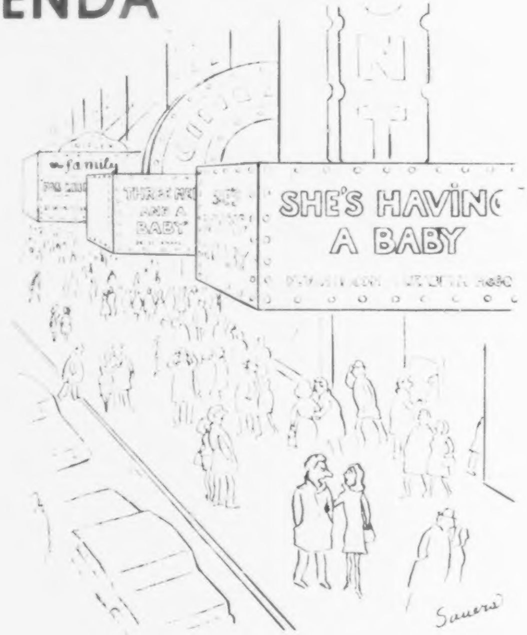
– C.H.

POSITIONS/ PROFESSIONALS

The Rockefeller Foundation is continuing its **Social Science Research Fellowship** program in population studies in 1989. This program will enable up to six highly qualified persons who have received social science doctorates within the last 10 years to receive appointments as scholars in developing countries starting in late 1989. They will be placed at universities that have training and research programs in population studies or at research centers, and will be expected to do collaborative research with scholars at the host centers and some teaching. The program is open to citizens and permanent residents of the U.S. and Canada. Applications must be received by Dec. 31, 1988.

For further information, contact: Fellowship Office, Rockefeller Foundation, 1133 Avenue of the Americas, New York, N.Y. 10036.

ADDENDA



"I told you I'd think about it"

Drawing by Sauers; ©1988 the New Yorker Magazine, Inc

CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in Current Readings. Publishers may address review copies to Book Review Editor, POPULATION TODAY, Population Reference Bureau, 777 14th St., N.W., Washington, D.C. 20005.

DOLLARS AND DREAMS: The Changing American Income Distribution, by

Frank Levy. New York: Russell Sage Foundation, 1987. 259 pages. $27.50. ISBN 0-87154-523-3.

Demographic concerns with income inequality have typically been of two kinds. One concern has been with the extent to which mortality or fertility differences among population groups, usually subnational, can be explained by their income variations. A second focus has been aggregate – mainly national – demographic behavior patterns and whether these can be usefully related to overall measures of income inequality (for example, "Gini" coefficients that summarize the extent to which lowest to highest income classes differ in their shares of total income). Under either approach, the direction of cause-effect analysis has been from income distributive explanations to demographic outcomes.

Dollars and Dreams, part of a census monograph series dealing with "The Population of the United States in the 1980s," heads in an opposite direction; it takes demographic or other influences as the causal entities, and views income distribution patterns or trends as their effects. Within this framework, the coverage of topics singled out for discussion ranges widely.

Size distributions of income (both by family and individual units of observation) receive main emphasis, but this is far from exclusive. Distributional aspects among family type, sex-age-race, occupational, geographic, and metropolitan status categories all obtain extended attention, as do distinctions between money and nonmoney sources of income, private and public sources, and others.

Similarly wide ranging is Levy's coverage of the causal, conditioning, and consequential factors deemed central to interpreting the distributional facts: the early post-World War II economic, social, and demographic settings for what was to follow through 1984; family structural transformations; interregional and intrametropolitan migration aspects; changing labor force correlates; the role of occupational-industrial changeovers; welfare implications; and aging tendencies – in each case with attention to their progression into the early or mid-1980s. Readers of this clearly written, user-conscious narrative are not likely to finish reading without gaining a new awareness of the potential reach of distributional cause-effect linkages affecting American incomes.

As to main conclusions, several recur. Despite widespread beliefs to the contrary in the U.S., family income inequality "has remained relatively constant since World War II," following a period of modestly lower inequality between the late 1940s and early 1980s (of which more below). Such constancy, however, has neither been welfare-neutral nor an outcome of fixed causal characteristics. Post-1973 shares of the nation's income pie have implied smaller gains or even absolute declines in material well-being for many, given the watershed drops in output and productivity which have taken place in recent years, compared to pre-1973.

Equally significant have been the changed demographic and socioeconomic profiles of the U.S. lowest-income population sectors: "Incomes of the elderly have moved up while incomes of younger families have moved down. Fewer families have at least one worker while more rely on government benefits. Regional income gaps have closed but city-suburban gaps have grown larger, a reflection of the growing number of city families headed by single women." Moreover, "As a source of income inequality, changes in family structure have potentially more importance than any other factor we have examined."

The great bulk of the volume's empirical materials stem from survey and other recurring data sources rather than from decennial census data proper; presumably the reason has been to take advantage of the most recent data available at time of writing.

Despite this, the most striking overall empirical conclusion for the volume – involving the constant inequality conclusion cited earlier – is clearly questionable at best and may well be seriously misleading. Based largely on comparisons between "end year" measures for 1947 and 1984, the conclusion ignores the fact that rising inequality tendencies, while inching rather than pronounced in yearly amounts, have been accumulating ever since the 1970s and have apparently been gaining momentum throughout this decade to 1986, a pattern the author himself has recently acknowledged (*New York Times*, May 1, 1988, business section, p. 3). The question takes on double significance in this presidential year, both for its bearing on a major socioeconomic trend possibility, and for its potential bearing on voter choices come this November.

– George J. Stolnitz

SPOTLIGHT

FRENCH POLYNESIA

Population (mid-1987 est.): 176,600
Land area: 1,418 sq. miles
Sea area: 1,544,000 sq. miles
Births per 1,000 pop.: 30.6
Deaths per 1,000 pop.: 5.5
Rate of natural increase: 2.5 percent
Total fertility rate (1985-86 est.): 3.6 children per woman
Infant mortality rate: 19 infant deaths per 1,000 live births
Life expectancy at birth (1985 est.): 71 years
GNP per capita (1985 est., corrected for Purchasing Power Parity): US $7,300
Capital: Papeete

by John F. May

French Polynesia has a population that is scattered over four main archipelagos (Society Islands, Marquises, Australs, and Tuamotu-Gambier) and divided among various ethnic groups (Tahitians or Polynesians, "Demis," i.e., half European and half Tahitian/Polynesian, Chinese, and Europeans). These subgroups of the population, divided both ethnically and geographically, are all reasonably advanced in their demographic transition, albeit at different stages. This process is fairly well documented since French Polynesia, as an overseas territory of France, has a sophisticated data collection system.

The latest census, conducted in October 1983, yielded a total population of 166,753, of which more than 85 percent lived in the Society Islands group. About 50 percent of the population is less than 20 years old and slightly more than 5 percent is older than 60. The rate of natural increase is moderate, mostly due to the recent decline in fertility (the current total fertility rate of 3.6 lifetime children per woman is average by South Pacific standards). Mortality, especially infant mortality, has sharply declined since World War II, to equal industrialized countries' levels, at least on the most developed islands.

Internal migration is important to the population dynamics of French Polynesia, while international population movement – mostly between France and its overseas territories – plays an unpredictable role. For instance, following the political turmoil which occurred in the early 1980s in New Caledonia, another overseas territory of France, several hundred New Caledonians, originally from France, decided to move to Tahiti. More recently, however, immigration into French Polynesia seems to have declined substantially.

The results of the upcoming census, to be held in September 1988, should confirm that the demographic transition is continuing in French Polynesia. Life expectancy at birth will increase moderately, but infant mortality may soon level off because improvements will probably be harder to achieve in the outer islands. Fertility will continue to decline: About two-thirds of women aged 15-49 in Tahiti used a modern method of contraception in the early 1980s. Whether this pattern will spread to the entire territory remains to be seen. World Bank projections, assuming little decline in mortality, yield a total population of just under than 400,000 by the year 2030.

The major remaining challenge for French Polynesia may be to develop the numerous small islands scattered over a gigantic ocean area territory that is about half the size of the 48 contiguous states of the USA. Traditional income-generating activities such as the production of coconuts, mother-of-pearl, and vanilla have gradually been replaced by tourism-related activities. Modern-sector jobs have also been made available by the creation of the Pacific Experimentation Center in 1962, and by the establishment of the French nuclear test base in the Tuamotu-Gambier group. Nevertheless, exports from French Polynesia cover only a marginal part – about 5 percent – of the imports (mostly fuel, foodstuffs, and equipment). The economy of the territory will therefore remain heavily dependent on transfers from metropolitan France unless enormous investments are made to extract the potentially huge food, mineral, and other resources from the surrounding ocean.

John F. May is Senior Population Analyst at The Futures Group, Washington, D.C.

Tahiti Tourist Promotion Board

The largest island in French Polynesia is Tahiti.

POPULATION TODAY

Vol. 16, No. 9 September 1988

FEATURES

3 Meanwhile, on the legal immigration front . . .
Kennedy-Simpson bill proposes major changes in quotas and priorities for the half-million people who legally enter the U.S. each year

4 Judge rules against "Mexico City policy"
Controversial policy had barred family planning funding via groups connected with abortion

4 Statistical programs are losing count
Federal budget cutting and program restrictions have caused a withering of data gathering and dissemination during the 1980s

5 Most Guatemalan women know about contraception, 23 percent use it
Prevalence low among indigenous (Indian) women; country favors private sector distribution

5 Michael F. Brewer (1929-1988)

6 Population resourcefulness
Some useful methods and materials for teaching demography to undergraduates

8 Empire State confronts realities of Post-Number-1 status
The U.S.'s most diverse state is Number 2 going on 4 in population size, with important changes coming

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Art Haupt

Liberty's immigration lamp still lifted high? (See page 3.)

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FROM THE EDITOR'S DESK

A population irony of our time: Just as statistical activities in developing countries have been rapidly expanding, equivalent programs in their wealthier neighbors are being curtailed.

Protests against census taking have increased in Europe to the point where no census has been conducted in the Netherlands since 1970 and the recent West German census was seven years late. Censuses in Europe are often accused of being an invasion of privacy or a waste of public funds. In the U.S., budget cuts have reduced the publications programs of many agencies (see page 4), although there has been little protest against the principle of census taking itself. Lately, U.S. marriage and divorce statistics collection was threatened with cancellation but that threat appears to have been averted for the moment.

The situation is doubly ironic given the expanding interest in "demographics" generally. People often expect that virtually any demographic question they may have can be answered, and are surprised when the statistic they're seeking isn't available for a particular ethnic group, geographic area, or time period more recent than the last Ice Age.

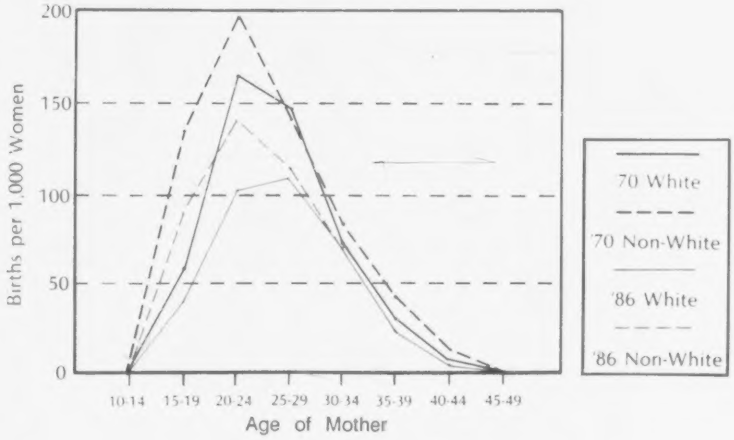
This reminds us, for no particular reason, of a story told by an interlocutor who was finishing a very detailed national survey interview on fertility and contraceptive practice. No problem, until he came to the last question--on income. At which point the respondent exclaimed, "I didn't know you were going to get PERSONAL!"

Anyone for reviving the idea of a five-year census?

– Carl Haub

SPEAKING GRAPHICALLY

U.S. Age-Specific Fertility Rates by Race, 1970 and 1986



Source: National Center for Health Statistics

POPULATION TODAY

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Student* (50% discount)	20	25
Library/nonprofit organizations	50	65
Other organizations	250	315

*Educators and students should send supporting documentation.

Now, Legal Immigration Reform?

Preoccupation with the recent Immigration Reform and Control Act of 1986 (IRCA) has overshadowed the fact that immigration law in general is currently undergoing new scrutiny.

Concern is rooted in the nation's below-replacement fertility rate and its reliance on immigration to provide growth. Immigrants now compose about one-third of U.S. population increase; in 1987, 601,516 legal immigrants entered the U.S., including refugees and asylees. An unknown number also entered illegally; estimates run from 100,000 to more than half a million per year.

The most recent attempt to revise immigration policy is the proposed Immigration Act of 1988, which has already passed as a bill in the Senate by a vote of 88 to 4, and is pending in the House. Not since the Immigration Act of 1965, which was a series of amendments to the 1952 Immigration and Nationality Act, have there been any revisions in legal immigration policy. The bill, sponsored by Sens. Edward Kennedy (D-Mass.) and Alan Simpson (R-Wyo.), proposes to reduce the emphasis of current policy on family unification, with more emphasis given occupational preferences.

Proposed Ceilings

The major changes that the Kennedy-Simpson bill would enact are as follows:

- a new annual ceiling of 590,000;
- a new set limit on family visas at 440,000, including immediate family members and family preference categories;
- a new cap limiting independent visas to 150,000, including occupational preferences and point system entries;
- a new per-country limit, under which immigrants from any one country may not exceed 7 percent.

In summary, the bill calls for the establishment of an annual ceiling of 590,000 legal immigrants. Currently there is no set level for yearly immigration, due to the unrestricted immigration available for immediate family members of U.S. citizens (spouses, minor children, and parents).

Under the Kennedy-Simpson bill, a total of 440,000 family-connected visas would be allocated per year. The family preference categories (for family members other than immediate) are determined after subtracting the total immediate relatives who immigrated in the prior year from the total 440,000. Current law also allocates according to preference but immediate family members are exempted; thus their total number is undetermined. The bill attempts to correct this by placing immediate relatives as top priority and then allocating the remaining slots by preference.

Continued on page 8

Current Immigration Law

(1987 total = 484,257 visas issued, except refugees)

IMMEDIATE FAMILY

1987 figures:

218,575
45% of total
admitted

Immed. family members of U.S. citizens
(spouses, minor children, parents)

Exempt from numerical limitations

PREFERENCE

211,809
44% of total
admitted

Visas issued in order of preference

Family	Not more than
1st: unmar. adult children of citzns	20%
2nd: immed. fam. of permanent res.	26%
4th: mar. adult children of citzns	10%
5th: brothers and sisters of citzns	24%
total	80%

53,873
11% of total
admitted

Independent [ie, occupational]	
3rd: professional workers	10%
6th: skilled and unskilled workers	10%
total	20%

Subject to numerical limitations

Proposed Kennedy-Simpson Act

(Total ceiling, = 590,000 visas, except refugees)

FAMILY

Family ceiling:
440,000 visas
(75% of total ceiling)

Immed. family members of U.S. citizens
(spouses, minor children, parents)

Visas not used by immed. family become available for nonimmed. family

Nonimmediate Family	
1st: unmar. adult children of citzns	15%
2nd: immed. fam. of permanent res.	65%
3rd: mar. adult children of citzns	10%
4th: never-married brothers and sisters	10%
Immed. family total	100%

INDEPENDENT

Independent ceiling:
150,000 visas
(25% of total ceiling)

Preference

1st: special (certain professions, etc.)
2nd: professional workers
3rd: skilled workers
4th: "employment-generating investors"
total = not more than 55%

5th "point system" entrants (qualifications based on education, occupation, English language skills, etc)
total = not less than 45%

independent pref. total = 100%

Subject to numerical limitations

Visas issued in order of preference, except for 5th preference, which must be at least 45% of total independent visas

Mexico City Policy Dealt Legal Setback

On July 5 a federal judge in Washington struck down the Reagan Administration's prolife "Mexico City policy" restricting U.S. family-planning assistance abroad.

Judge June L. Green was deciding in a suit brought against the U.S. Agency for International Development (AID) by the DKT Memorial Fund and two foreign co-plantiffs. The suit contested the Reagan Administration's foreign assistance guidelines which make overseas family planning groups ineligible for U.S. government aid if they provide or refer for abortion.

The policy not only prohibited U.S. family-planning funds from being used for abortion, but required private family-planning organizations receiving such funds to refrain from abortion activities. In that respect, it went beyond existing law, which prohibits U.S. funds themselves from being used to promote abortion. The policy was originally announced by U.S. representatives at the 1984 UN-sponsored International Conference on Population, held in Mexico City (hence its nickname), and represented a new salient in the protracted war over abortion at home and abroad. AID spends $213 million for population programs annually. (as of Fiscal Year 1988).

Judge Green ruled, however, that such a sweeping prohibition violated the First Amendment rights of free speech and association entitled the U.S. organizations through which AID funds international family planning. The court order accompanying her decision applies to funding for both U.S. and foreign-based family planning groups, which are funded through U.S. groups.

Judge Green denied a request by the Justice Dept. that she stay her order. The government is now appealing that order. If the appellate court does not stay the order pending appeal, a new administration with its own population priorities is likely to be in power in Washington before the case is settled.

—A.H.

Incredible Vanishing Statistics

As the U.S. economy and population grow in size and complexity, so do the value and utility of U.S. economic and social statistics. These numbers "are the heavenly bodies of economics," as *Time* magazine poetically put it, in the sense that business and policy planners use them as stars to steer sales campaigns and public programs by.

But the 1980s have seen a significant diminishing of federal statistical gathering and dissemination. Budget cuts and government philosophical shifts have been among the causes for this downward trend. But the result, writes Katherine K. Wallman in a new report in PRB's *Population Trends and Public Policy* series, has been that government agencies collect information less frequently, garner less content, and have curtailed the scale, or the timeliness, of distribution of the resulting data.

Consequently, the output of important U.S. data has slackened. Wallman, executive director of the Council of Professional Associations on Federal Statistics (COPAFS), based in Alexandria, Va., tallies the reductions: The Census Bureau's Current Population Survey, for example, has suffered reductions in sample size, causing loss of data quality and geographic detail. What was once the Annual Housing Survey is now conducted every two years. The National Center for Health Statistics has severely reduced the frequency of seven major surveys.

Another significant yardstick: Overall, the normal operating budgets of nine agencies producing economic statistics have fallen from $570 million in 1980 to $498 million in 1988 (as measured in constant 1988 dollars), a decrease of nearly 13 percent.

Meanwhile, the Reagan Administration and others have been evolving alternative "philosophies" of how much statistical gathering there should be. A long-term government concern over the "burden" of government surveys on their respondents has culminated in the Office of Management and Budget "almost exclusively" evaluating data-collection proposals in terms of the potential burden. This was most visibly apparent in the 1987 flap over abridging the 1990 Census form. (Ultimately, after data user protests, changes to the form are now slated to be minor; see December 1987 *PT*.)

Austerity has also reduced funds available to improve or extend statistical gathering, hobbling progress in the field. Deregulation of private sector businesses has meant they no longer have to provide statistics concerning their operation to the government. And the rise of a lucrative new information industry that actually *makes money* from statistics has fostered not only privatization but a "user-fee"-based interface between government data suppliers and private data customers. This mercantile trend, Wallman suggests, may discourage the generation of data that are needed but don't have obvious profit potential; also, because of fee scales, data are less accessible to the general public.

What are the alternatives? Wallman lists suggestions that have been made to protect the government's statistical apparatus. These range from consolidating the principal statistical agencies into a single, independent government office to removing statistical functions from the Office of Information and Regulatory Affairs and perhaps the Office of Management and Budget. In any case, Wallman argues, "Only the federal government can produce statistical series which are uniform and consistent for the Nation as a whole and which are of unquestioned honesty and integrity."

—A.H.

Copies of "Losing Count: The Federal Statistical System," by Katherine K. Wallman, No. 16 in PRB's *Population Trends and Public Policy* series, are available for $3.00 per single copy; 2-10 copies, $2.30 each; 11-50 copies, $1.90 each; 51 or more, $1.50 each. Orders of $50 or less must be prepaid and include $1.00 for postage and handling. Send order and remittance to Population Reference Bureau, Inc., Circulation Dept., P.O. Box 96152, Washington, D.C. 20090-6152. Make checks payable to PRB.

U.S. Poverty Rate Holding Steady

About 13.5 percent of the U.S. population lives in poverty, as of 1987, according to figures just released by the Census Bureau.

That figure is statistically the same as in the previous year. Poverty in the U.S. has declined since 1983, though it still remains well above the recent low of 11.4 percent reached in 1978 before the 1981-1983 recession bumped the rate upward (to the two-decade high of 15.2 percent reached in 1983.

The poverty threshold – e.g., $11,611 annual income for a family of four in 1987 – is defined by the U.S. Office of Management and Budget. It does not include the value of noncash benefits.

Michael F. Brewer 1929-1988

Dr. Michael F. Brewer, PRB's president from 1971 to 1974 and a trustee for many years, died on July 26 after a long illness.

Dr. Brewer was a native of New York City and a graduate of Yale University. He held a master's degree in natural resources conservation from the University of Michigan and a doctorate in agricultural economics from the University of California at Berkeley.

Prior to his tenure at PRB, he served on the staff of the Council of Economic Advisors during the Kennedy Administration and as vice president of Resources for the Future. After leaving PRB, he served in the Carter Administration and as director of the National Agricultural Land Study for the Council on Environmental Quality. He authored a 1981 PRB *Population Bulletin* on "The Changing U.S. Farmland Scene" and was honored as a PRB Fellow.

A memorial service will be held Saturday Sept. 17, at 11 a.m. at Cedar Lane Unitarian Church in Bethesda, Md.

– *I.M.*

SURVEY REPORT

Guatemala

Inter-American Development Bank

Guatemalan children play

Only 23 percent of eligible women in Guatemala use contraception, according to results of the 1987 National Survey of Maternal and Infant Health of Guatemala. The survey, conducted under the Demographic and Health Survey project, included 5,122 women aged 15 to 44.

Between 1982 and 1987, the total fertility rate (TFR) was an average of 5.6 lifetime births per woman, while the survey indicated that many women would prefer fewer children.

Ninety percent of the women who were familiar with contraception also knew where to obtain it. The pill and female sterilization are not only the most widely known but also the most commonly used methods: 18 percent of married women had used the pill at least once and 10 percent had been sterilized.

Although 34 percent of married women reported that they had practiced family planning, only 23 percent were contracepting at the time of the survey. Eighteen percent used a modern method and 5 percent preferred a traditional one. Female sterilization was the most prevalent method, followed by the pill and rhythm, used by 4 percent and 3 percent, respectively.

Women over age 30 were almost twice as likely to be contracepting as younger women, and 41 percent of urban women used contraceptives compared to only 15 percent of rural women. The survey reported that over a third of the non-indigenous (i.e., non-Indian) Guatemalan women practiced contraception but only 6 percent of the mostly rural indigenous women were contracepting.

The private sector supplies two-thirds of the contraceptives used by Guatemalan women; of this, the Association for Family Welfare (APROFAM) distributes just over one-third, with private clinics and doctors providing the remainder. In the public sector, nearly half of the contraceptives are provided by public hospitals, the rest by health centers and the Guatemalan Institute of Social Security (IGSS).

The reproductive intentions of noncontraceptors gives some measure of the unmet need for family planning. Two-thirds of married women who do not want more children were also not contracepting. In urban areas, 47 percent of women who do not want more children did not contracept compared to 79 percent in rural areas. The unmet need is greatest among the Indian population: 91 percent of the indigenous women who did not want more children were not using contraception. The largest gap in the unmet need occurs between women of differing educational attainment: 84 percent of those with no education, compared to 24 percent of those with a high school education, were not contracepting.

– *Linda Owens*

Linda Owens is a PhD candidate at the Univ. of Illinois at Urbana-Champaign.

DEMOGRAPHER'S PAGE

Alternative Resources For Teaching Demography

by Jill S. Grigsby

This article is adapted from the author's paper "Alternatives and Supplements to Standard Demography Textbooks," presented at the annual meeting of the Population Association of America, New Orleans, La., April 1988.

Most students enrolled in an undergraduate demography course will never become professional demographers and may never meet a demographer apart from the course instructor.

But after college they will surely hear and read much about "demographics" in the media, and many will use demographic information in their work. Thus their demography course can offer a singular opportunity for them to obtain a basic understanding of the field – What concepts do demographers study? What kind of data do they use? How do they organize and present data?

Learning Basics

Textbooks play a part. Most standard demographic texts – widely used in introductory demography courses – explain concepts and data sources, demonstrate simple measures, and summarize substantive research findings.

Upper-level undergraduate courses, however, even those with no demography prerequisites, often assign no textbook readings but instead rely primarily on articles and book chapters put together in a "course pack" at a duplicating store.

Even instructors who do use textbooks often assign supplementary readings that cover additional substantive material. In short, most textbooks fall short of achieving the pedagogical objectives of an undergraduate demography course – objectives for whose sake it may be worthwhile to leave out some substance in exchange for a reading which can accomplish some of the following goals:

First, students should be active participants, not simply passive consumers of information.

Instructors want students to think critically as they learn and not accept everything they read or hear at face value. Undergraduates need to develop a skeptical orientation toward published data and the conclusions analysts draw from data.[1] Moreover, undergraduates should begin to acknowledge that even reliable and valid data can generate more than one interpretation (i.e., data never "speak for themselves").

In some undergraduate demography courses, instructors will assign readings which represent opposing perspectives. Few instructors, however, are willing to assign flawed readings to their students, even though giving students a chance to point out inconsistencies and problems can further their intellectual development.

Most alternatives or supplements to demography textbooks are relatively short – an article or book excerpt. When students are assigned an entire book or large sections of a book, they must learn to read selectively, deciding what parts are most relevant to the course and drawing out the author's main argument.

It is tempting to prune or condense class readings for the sake of efficiency, which may be necessary for most of the course, particularly one aimed at freshmen and sophomores. More advanced students, however, can use practice in critically reading an entire book, and one or two books in a semester can substitute for several articles.

Second, such a course should make connections to the rest of the undergraduate curriculum and to other academic or intellectual disciplines.

College students may be surprised to learn that many of the world's influential scientists, philosophers, and public figures have included population issues in their writings or speeches. Students should also see the relationship between demography and the methods and theories of other social sciences. Even when a demography course is taught within one department, usually sociology, students often read articles by economists, anthropologists, or historians which deal with population issues.

Finally, an undergraduate demography course should demonstrate the ways public and private decisions affect demographic processes and structure.

What is good for the individual may not necessarily be optimal for society. Students should become aware of the intended and unintended impact governmental policies have on fertility, mortality, and migration. To raise these issues, some textbooks include at the end a chapter on population policy; others integrate policy issues through-

Box 1: Undergraduate Course Resources

Institutions

Population Communications Services, Johns Hopkins Univ
Population Reference Bureau, Inc
U S Census Bureau

Periodicals

American Demographics
Atlantic Monthly
Challenge
Christian Science Monitor
Daedalus
Harper's
Los Angeles Times
The New Republic
New York Times
Population and Development Review
Populi
Public Opinion
Science
Scientific American
Wall Street Journal

Jill S. Grigsby is Assistant
Professor, Dept. of Sociology
and Anthropology, Pomona College

Box 2: Overviews of Population Trends

Lester Brown et al. *State of the World, 1988: A Worldwatch Institute Report on Progress toward a Sustainable Society.* New York: Norton, 1988.

Werner Fornos, *Gaining People, Losing Ground: A Blueprint for Stabilizing World Population.* Washington, D.C.: Population Institute, 1987.

Scott W. Menard and Elizabeth W. Moen, Eds. *Perspectives on Population: An Introduction to Concepts and Issues.* New York: Oxford University Press, 1987.

Jane Menken, Ed., *World Population and U.S. Policy: The Choices Ahead.* New York: Norton, 1986.

Thomas Merrick, with Population Reference Bureau, Inc., staff, "World Population in Transition," *Population Bulletin,* Vol. 41, No. 2. Washington, D.C.: Population Reference Bureau, Inc. 1986.

Scientific American, *The Human Population.* San Francisco: Freeman, 1974.

World Bank, *World Development Report 1984* [special theme of population issues]. New York: Oxford University Press, 1984.

out the course, which is my preference and which is easy to do with alternative readings.

Resources for Courses

Most books and articles which demographers read for their research are not appropriate for undergraduate courses, particularly at the introductory levels. Upper-level students should be aware of professional journals, especially if they are using libraries to write research papers, but in general, journals like *Demography* or *Population Studies* are not good sources for undergraduate class readings. The resources in Box 1 can serve the purposes of an undergraduate demography course more effectively.

One exceptional professional journal is *Population and Development Review* (PDR). The research articles do not require a sophisticated background in statistics or even demographic methods, and many instructors use articles from PDR in their undergraduate courses. In addition to research articles, the documents section contains short selections (e.g., China's 1981 marriage law) in a printed format students find easy to read. Essays on population by famous persons like Benjamin Franklin, Adam Smith, and George Bernard Shaw have appeared in an archives section.

Another meaty resource for undergraduate class readings is *Scientific American*, which occasionally includes articles dealing with the core of demography. The authors present research findings in a nonacademic format, without footnotes or references to distract the reader. The figures and tables are easy to understand and do not require prior statistical knowledge.*

Although they contain copious tabular material, the U.S. Census Bureau's various reports (e.g., *Current Population Reports*, Series P-23, *International Population Reports*, Series P-95) usually include an introduction summarizing the data and describing the trends in clear English. The Bureau also offers a College Curriculum Support Project.

The Population Reference Bureau, Inc. (PRB), is a valuable resource for class readings, audiovisual materials, and teaching ideas (in *Population Education Interchange*, the quarterly newsletter for teachers).

Other periodicals that appear frequently on undergraduate syllabi are listed in Box 1. Some of the book reviews in these magazines highlight material which demography students would not ordinarily come across in the course of their research. Many newspapers also feature local demographic issues, such as the effect of recent migration patterns on school enrollments. Students can analyze these articles using their demographic tools as well as their own first-hand knowledge.

Substantive Overviews

One advantage of using a textbook is that students receive a succinct overview of demographic facts and findings, something many undergraduates find comforting. Students taking upper-level courses, however, may find textbooks too general or bland, particularly if the course focuses on a special theme, like "Contemporary Population Problems" or "Population and the Environment."

These courses often have no prerequisites, so that students need background reading early in the semester. The books in Box 2 summarize demographic issues, not always as a textbook would, but rather around specific themes which will be more relevant to some courses than others.

Continued next page

Box 3: Demographic Methods and Techniques

Printed Material

Shirley Foster Hartley, *Comparing Populations.* Belmont, Calif.: Wadsworth, 1982.

Arthur Haupt and Thomas T. Kane, *Population Handbook* (2nd ed.). Washington, D.C.: Population Reference Bureau, Inc., 1985.

James Palmore and Robert Gardner, *Measuring Fertility, Mortality, and Natural Increase.* Honolulu, Hawaii: East-West Center, 1984.

U.S. Census Bureau, *Census '80: Projects for Students.* Washington, D.C.: U.S. Government Printing Office, 1981.

Microcomputer Software

Applied Population Laboratory & Center for Demography and Ecology, Univ. of Wisconsin. *Population Pyramids* [program for the IBM PC]. 1986.

ESCAP, *ESCAP/POP: A Computer Program for Projecting Populations by Age and Sex* [program for the IBM PC], Population Research Leads No. 22. Bangkok, Thailand: ESCAP, 1986.

The Futures Group, *DEMPROJ–A Demographic Projection Model for Development Planning* [program for the IBM PC]. Washington, D.C.: The Futures Group, 1987.

Ned Levine, *"Halley": A Population Analysis Program Using Lotus 1-2-3* [program for the IBM PC]. Los Angeles: University of California, Graduate School of Architecture and Urban Planning, 1986.

Robert Sendek, *FIVFIV/SINSIN for IBM-PCs and Compatibles.* New York: Population Council, 1986.

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*A list of recent population selections from *Scientific American* is available free by writing *Population Today* and enclosing a self-addressed, stamped envelope.

Teaching Demography

Continued from preceding page

Menard and Moen's *Perspectives on Population* provides one of the few collections of articles in a single volume. It is comprehensive enough to serve as a primary text, though it may be too expensive ($24.95 in paper) to include on a course reading list with other books. The *Scientific American* volume (1974) is dated, yet contains enough classic articles to still merit a place on many undergraduate course reading lists. The Fornos and Menken books place population issues in a policy framework, focusing on international options for the U.S.

Methods and Techniques

Most undergraduate demography courses include some discussion of demographic methods. Instructors who use textbooks may want more detailed explanations of certain techniques; for example, constructing a life table, which Palmore and Gardner's *Measuring Fertility, Mortality, and Natural Increase* provides. Instructors who do not use textbooks almost always include at least one of the selections in Box 3.

As personal computers become even more widely available, software for teaching demographic techniques should proliferate. "Pyramids," developed at the Univ. of Wisconsin, leads students through a series of menus, showing them how to construct and interpret population pyramids. The other software packages in Box 3 produce population projections and are easy enough for undergraduates to use with minimal instruction.

Conclusions

The readings for an undergraduate demography course cannot be simply "watered down" versions of a graduate course syllabus. Putting together an appropriate undergraduate reading list requires instructors to look beyond the material they come across for their own research papers and to examine the ways nondemographers look at population issues and trends. The rewards from this time-consuming process will certainly show up in the classroom and can spark a new line of research as well.

Reference

1 Dudley Poston and Teresa Sullivan, "Developing Demographic Literary and Evaluation Skills: Techniques for the Introductory Demographic Course" *Teaching Sociology*, Vol. 14, No. 2, April 1986.

Empire State Adjusts to Post-#1 Era

New York State has always held a key position among American states. With shifting national trends, however, including internal migration of people and resources toward the Sun Belt, the position and make up of the Empire State are changing. A new PRB report written by Leon F. Bouvier and Vernon M. Briggs, Jr., examines those changes from a population viewpoint.

New York's 1988 population stands at about 17.8 million. Its days of rapid population increase ended four decades ago. California's population passed it in 1963, and it is likely to be passed by Texas in the 1990s and by Florida early in the next century.

In terms of numbers of groups represented, New York is probably the most ethnically diverse state – a diversity that is likely to increase as the influx of new immigrants continues, the report says.

By 1990, projections show that non-Hispanic whites will make up two-thirds of the state's population, while 15 percent will be black, 14 percent Hispanic, and 4 percent Asian. If present trends continue, by 2040, Hispanics will outnumber non-Hispanic whites. Similar trends are projected to take place in New York City, where, the report states, changes in racial and ethnic composition have resulted in there being "no majority group today."

Occupations and labor force composition will also be shifting. And, important for education policymakers, the changes in overall population composition will be preceded, and exceeded, by massive shifts in the composition of the school-age population.

– A.H.

The Population and Labor Force of New York: 1990 to 2050 (92 pages), is available from PRB, Circulation Dept., Population Reference Bureau, Inc., Box 96152, Washington, D.C. 20090-6152 for $10 per copy. Orders of $20 or less must be prepaid and include an additional $1 for postage and handling. Make checks payable to PRB.

Immigration Reform?

Continued from page 3

Current immigration law sets aside about 55,000 visas for immigrants who qualify under the occupational preference categories. These are for professional or highly skilled immigrants and their families and for needed skilled or unskilled workers and their families. Admission of refugees remains guided by the Refugee Act of 1980 under which an annual ceiling is set by the President after consultation with Congress.

$1 Million Visas

The Kennedy-Simpson bill, in a significant shift, would allot a total of 150,000 "independent" or nonfamily visas. Fifty-five percent of these would be apportioned by preferences similar to the existing system – plus an extraordinary new category of preferences for "employment-generating investors." Each of these immigrants would qualify for entry by promising to invest $1 million in the U.S. and employ at least 10 U.S. citizens or permanent residents.

The remaining 45 percent of the independent visas (plus any unused by the other independent preferences) would be allocated to individuals who qualify according to a point system based on the skills and attributes they possess such as education, occupation, age, English language skills, and "occupational demand."

The point system is designed to be flexible in terms of the needs of the U.S. labor market, so that at times particular occupations may be designated as "in demand" and qualified applicants would receive points for being able to fill the need. Numbers of refugees, asylees, and aliens whose status was being legalized would continue to be unrestricted (admitted in addition to the national level).

Other modifications in the Kennedy-Simpson bill: For the first three years, 30,000 visas would be borrowed from the independent category and distributed to the backlogs of "fifth preference" applicants (brothers and sisters of U.S. citizens), and no labor certification is needed for independent immigrants entering through the point system category.

The shift in emphasis, from family unification to occupational qualifications, although not numerically dramatic, is ideologically significant. Currently about

90 percent of legal immigrants enter the U.S. under one of the family preference provisions. The Kennedy-Simpson bill does not reduce the visas available for family members, but through the increase in independent visas, total family connection visas will fall to about 80 percent of all visas. This shift is an attempt to emphasize skills and contributions in the "national interest."

The new bill would endeavor to remove from the current system the "unintentional discrimination" that results from the strong reliance on family ties between immigrants. According to Sen. Simpson, the two unintended consequences of immigration law that went into effect when the system was revised in 1965 are that a few countries have come to dominate the legal immigration system and the level of immigration has risen dramatically. (The top three sending countries in 1987 were Mexico, 72,351; the Philippines, 50,060; and South Korea, 35,849.)

"Although neither of these two results was anticipated by those who drafted the 1965 amendments and neither of the effects developed immediately," said Simpson, "the consequences have become clear and stark over the past 23 years, and the time is now ripe for change."

Not coincidentally, the majority of those taking advantage of the family preference emphasis and being reunited with their family members are also immigrants from both Asia and Latin America. Those concerned with the future composition of the U.S. have concluded that, if continued, the current emphasis on family ties promotes immigration from a region long after heavy initial immigration has taken place. Although maintaining families is a recognized priority, clearly many family-connected immigrants are not necessarily people with needed skills and education whose entry is also a policy goal.

At the core of the immigration reform effort is the issue of the composition of America's future population. The idea of restricting the present Asian and Latin American influx and promoting a renewal of European immigration alarms those who feel the implications of such a movement could be construed as racist. In the eyes of these critics, there is only a slim chance of such a bill becoming law.

– Audrey Singer

Audrey Singer is a PhD student in sociology at the Univ. of Texas at Austin.

SOFTWHERE

The Population Reference Bureau, Inc. announces two new data diskettes: The ever-popular *World Data Sheet 1988* and the recenly published *Metro Data Sheet*.

These databases, each of which come in a Lotus 1-2-3 ver. 1A format for the IBM PC, are PRB's electronic version of the popular wall charts.

PRB received tremendous favorable response with last year's release of a 1987 Data Sheet diskette. With it, users who have a personal computer and Lotus have been able to sort and select data for 174 countries. Touching the recalc key enables them to instantly project the effects of "what-if" scenarios on the world and its regions. (Such operations are difficult to calculate with the printed Data Sheet, as useful as it is.)

The price: $10 per diskette for individuals or nonprofit or academic institutions and $50 for corporations. Contact David Lamphere at PRB.

– D.L.

POPULATION UPDATE

Estimated United States Population:

As of May 1, 1988	245,695,000
As of May 1, 1987	243,511,000

The above estimates, the latest available, include armed forces overseas and are from U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1027.

Estimated World Population:

As of September 1988	5,143,000,000
Annual growth	89,000,000

Estimated by extrapolation from the mid-1988 population on PRB's *World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: March 1988

	12 months ending with March					
	Number		Rate			
Item	1988	1987	1988	1987	1986	1985
Live births	3,833,000	3,735,000	15.7	15.5	15.8	15.6
Deaths	2,167,000	2,089,000	8.9	8.6	8.7	8.8
Natural increase	1,666,000	1,646,000	6.8	6.9	7.1	6.8
Marriages	2,397,000	2,408,000	9.8	10.0	10.1	10.4
Divorces	1,167,000	1,160,000	4.8	4.8	5.0	4.9
Infant deaths	38,300	38,300	10.0	10.3	10.5	10.6
Population base (in millions)			243.9	241.6	238.9	236.7

Note. Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source. Monthly Vital Statistics Report (Vol. 37, No. 3) from the National Center for Health Statistics.

TAKE A NUMBER

All the Russias: A new series of detailed population projections for the USSR has been prepared by the Census Bureau's Ward Kingkade. The projections cover the period 1979 (the date of the last Soviet census) to 2050 and suggest phenomenal growth for non-Russian nationalities. Russians are barely a majority now in the USSR – 51 percent – and would sink to 40 percent by 2050 under the projections' "medium variant." Russians would still be the largest single nationality group, even by 2050, but the radically shifting ethnic balance will create some vexing problems for Soviet authorities. By 2000, one-third of the draft-age population will consist of non-Europeans whose lack of technical training and Russian language skills will reduce their value to the army. In addition the untrained and relatively immobile population in the Central Asian republic offers little relief for labor force shortages in the Russian and other European Republics where industry is concentrated.

For complete details on the projections and the assumptions used, *USSR: Estimates and Projections of the Population by Major Nationality, 1979 to 2050* may be ordered from Commerce/Census (CIR), Room 707, Scuderi Bldg., U.S. Census Bureau, Washington, D.C. 20233. Price: $10.00.

Major Nationalities in the USSR

	1979 (est.)		2050 (proj.)	
Group	No.	%	No.	%
Total	264,129	100.0	370,192	100.0
European	202,434	76.6	215,926	58.3
Slavic	190,362	72.1	202,205	54.6
Russian	138,267	52.3	148,233	40.0
Other	12,073	4.6	13,722	3.7
Central Asian	26,360	10.0	99,589	26.9
All Other	35,335	13.4	54,678	14.8

Note. In addition to Russian, Slavic includes Ukrainian and Byelorussians; other European includes Lithuanians, Latvians, Estonians, Moldavians, Jews, and Germans, Central Asians comprise Kirgiz, Uzbeks, Kazakhs, Turkmen, and Tadzhiks, and All Other comprises Georgians, Azeris, Armenians, Tatars, and Chuvash.

– C.H.

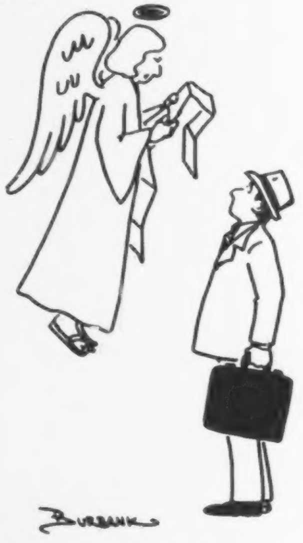
POSITIONS/ PROFESSIONALS

The Rockefeller Foundation invites doctoral students from sub-Saharan Africa to apply for **African Dissertation Internship Awards.** The program enables students enrolled in U.S. universities to return to Africa for extensive field research in areas relevant to economic development or poverty alleviation. Priority is given to topics in the fields of agricultural, health, and life sciences, but other proposals are welcome. Applicants are responsible for arranging affiliation with an African institution.

Preliminary inquiries are encouraged to determine the appropriateness of the research topic and the institution. Deadlines for application are Oct. 1, 1988, and Mar. 1, 1989; it is strongly urged that applications be submitted well in advance of the proposed field work's expected study date.

For further information, contact: African Dissertation Internship Awards, The Rockefeller Foundation, 1133 Ave. of the Americas, New York, N.Y. 10036.

ADDENDA



"In order to expedite the handling of the increased population, we have incorporated the use of computers and account numbers. Your account number is 8-514306-25. Please refer to it in all future communications. Thank you."

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CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in Current Readings. Publishers may address review copies to Book Review Editor, POPULATION TODAY, Population Reference Bureau, 777 14th St., N.W., Washington, D.C. 20005.

BERELSON ON POPULATION,

edited by John A. Ross and W. Parker Mauldin. New York, N.Y.: Springer-Verlag, 1988. 275 pages. ISBN 0-387-96716-8 $28.95.

Bernard Berelson joined the staff of The Population Council in 1962 as the Director of the Communication Research Program. He was not a trained demographer but possessed an impressive background in social science and a remarkable ability to absorb and synthesize information. He became Vice President within a year, and when Frank Notestein retired from the Council in 1968 he succeeded him as President. His dedication to the population field continued into the next decade.

This book contains 14 articles, either authored or co-authored by Berelson. The editors briefly review the articles selected for presentation and outline some of Berelson's groundbreaking contributions to the field: the establishment of *Studies in Family Planning*, the first journal in the field of population; the concept of incorporating family planning into postpartum care; and the Taichung experiment in Taiwan, the first large-scale study of a family planning program in the developing world.

One of Berelson's most important contributions to the population field, however, was his ability to gather, synthesize, and disseminate information. In the early 1960s, rapid population growth in developing countries was gaining widespread attention, but information regarding family planning, fertility, and development was not widely available. Berelson's published materials influenced not only those who sought to construct theoretical models of fertility decline, but also those who were to establish and implement population and family planning policies.

In reading the book, one is struck by his ability to gather and present large quantities of information with a high degree of clarity and organization. He synthesizes and distills the information into a concise analysis which frequently leads to creative insights. The reader is encouraged to draw conclusions and to ponder possible future action based on the data presented. While some of the material has become less relevant with the passage of time, the book should be required reading for students and activists in the field. His analytic but pragmatic approach renews one's will to continue seeking ways to improve the quality of life for everyone.

—Judy C. Felt

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SPOTLIGHT

PANAMA

Population (1988 est.): 2.3 million
Land area: 29,761 sq. miles
Births per 1,000 pop.: 27
Deaths per 1,000 pop.: 5
Rate of natural increase: 2.2 percent
Total fertility rate: 3.3
Infant mortality rate: 25 deaths per 1,000 live births
Life expectancy at birth: 71 years
GNP per capita: $2,330
Capital: Panama City

by Wendy Patriquin

Panama and its narrow isthmus between North and South America have played an important role in history, particularly in international trade. The country gained its independence from Spain in 1821, then became a part of the adjoining Republic of Greater Colombia until 1903, when the canal-hungry United States encouraged it to break away as an independent nation.

The U.S. then built the long-dreamed of Panama Canal, which was completed in 1914. The five-mile strip of land on either bank known as the Canal Zone was leased by the U.S. for a yearly payment until, after years of effort, treaties were approved in 1978 allowing for transfer of the Canal to Panama. The U.S. will continue to keep defense forces in the Canal area until this treaty expires in 1999.

Most of Panama's population is mestizo, primarily of mixed Spanish-Indian ancestry. The country also includes small groups of blacks (mostly of West Indian origin), whites, Indians, and Asians. There are three major Indian groups: the Cuna, who inhabit islands off the Atlantic coast, the Guayami who live in the western highlands, and the Choco who live in the eastern jungles. Roman Catholicism is the religion of the majority of the population, as traditional native Indian religions have virtually disappeared.

In the post-World War II period, migration to urban areas has been large and continuous. It is currently estimated that half the population lives in the nation's cities. Those who live in urban areas where trade and Canal-related services provide the bulk of employment have a relatively high standard of living. This is contrasted with the rural population which lives primarily at a subsistence level.

The economy is predominantly agricultural, with major products for local consumption being corn and rice, supplemented by such major export items as bananas, sugar, cocoa, and shrimp. The 52-mile-long Canal, which connects the Pacific and Atlantic Oceans, is the largest source of income in the country. Revenues from the Canal tend to make up for the difference between exports and imports. The Canal has tended to diminish in importance as most modern oil tankers and bulk cargo ships are too large to use it. Current development plans aim to reduce dependence on imported petroleum (which accounts for the bulk of Panamanian imports), develop natural resources, increase food production and create jobs.

Panama is one of the few developing countries that has been passing rapidly through the transition from high fertility/rapid growth to low fertility/slow growth. This has happened more as a result of individual personal choice than from official efforts – the government itself has never shown a deep concern for the effects of rapid population growth. Nearly 15 years ago, the Ministry of Health added family planning as a service of the public medical and health facilities, primarily as a maternal and child health activity.

Panama's total fertility (TFR) rate of 3.3 average lifetime children per woman is low by Latin American standards, lower than neighbor Costa Rica's 3.6, and about at the level of Brazil and Argentina. The UN projects a TFR of 2.6 children per woman by 2000, and 2.1 (replacement level) by 2025.

Knowledge of contraceptive methods is virtually universal at all levels of Panamanian society. Almost three-quarters of all ever-married women claim to have at some time used a contraceptive method. As would be expected, women with more than seven years of education have used contraception more than women with fewer than four years of education (84 versus 47 percent).

Panama Canal Commission

Ship passes through the Panama Canal in 1914.

POPULATION TODAY

Vol. 16, No. 10 October 1988

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How Mr. ZIP views the U.S. population. (See page 6.)

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FROM THE EDITOR'S DESK

During the Roaring Twenties, time seemed to come to a stop – at least in the United States. No wars or revolutions, lots of *laissez-faire* isolationism, bathtub gin, and Florida land booms. Government snoozed.

In retrospect, though, the 1920s can be better perceived as a revolutionary decade in U.S. history. Its secret theme was sociocultural breakout – led by economic boom times, changing roles for women, and the automobile, not to mention the Jazz Age. (Economic termites were also munching in the national foundations – but that's another story.)

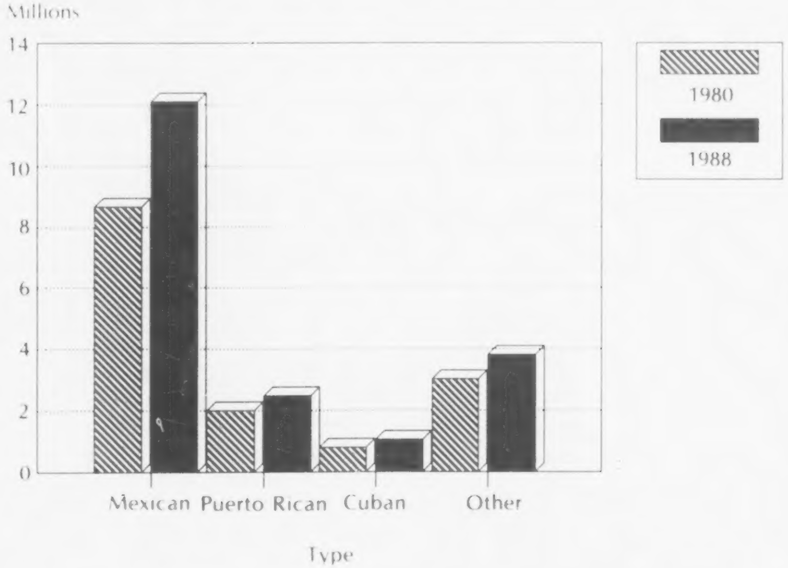
When it comes to U.S. current history, the 1980s have seemed like a similar snooze time. Call it what you will – consolidation, complacency, or leading the world by example – the U.S. turned inward. Far from feeling like they're on a mission to save the world, Americans (to judge by that instantly famous National Geographic Society survey last summer on geographic knowledge), seem unsure as to its whereabouts.

Other 1980s trends, however, have been extraordinary. This decade's theme – internationalization, as world-spanning economic and financial markets coalesce, global suppliers and customers establish beachheads here, data and communications overwhelm national borders, and some 6 or 7 million legal and illegal immigrants start new American lives. Snooze all you like, but *plus ça même chose, plus ça change.*

– Art Haupt

SPEAKING GRAPHICALLY

Components of the U.S. Hispanic Population: 1980-1988



There are 19.4 million Hispanics in the United States, according to a new Census Bureau survey. This population group has increased by 34 percent during the 1980s and now constitutes 8.1 percent of the total U.S. population. Fifty-five percent of all U.S. Hispanics live in either California or Texas.
Source: Census Bureau, *Current Population Reports*, Series P-20, No. 431.

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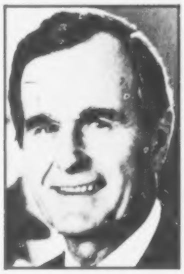
Population in Dust of Campaign Trail?

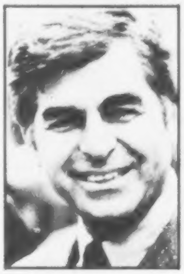
The Candidates' Positions on Population Programs



For many years, the United States has supported and helped to finance programs of family planning, particularly in developing countries. Our primary objective is to encourage developing countries to adopt sound economic policies and, where appropriate, population policies consistent with respect for human dignity and family values.

I will continue to support an approach to world population based on respect for human life, enhancement of human dignity, and strengthening of the family.

— George W. Bush



Richard Sobol

I strongly believe that in the years ahead, we will cease to think of environmental issues as "domestic" and will instead think of them as overarching concerns in the way we now think of foreign and defense policies. The dissolving ozone layer, global warming, overpopulation, deforestation and the loss of species are all aspects of the same phenomenon: as our aggregate effect on our environment increases, so too does the interdependence of the world's peoples. Future presidents will need to understand this in a way that past presidents have not.

Since 1968, the United States, principally [through the Agency for International Development], has also been a leader in providing funds and technical assistance for voluntary family planning throughout the developing world. In 1984, however, the Administration greatly restricted that role in the Mexico City Policy. Given the direct relationship between overpopulation and environmental degradation, a reversal of the Mexico City Policy would be both substantively desirable and conducive to restoring our role as a global leader on environmental and population issues.

— Michael S. Dukakis

With the Presidential campaign coming down the home stretch, many vital issues – from National Guard recruitment to the Pledge of Allegiance – have surfaced and sunk as Vice President George W. Bush and Gov. Michael S. Dukakis compete for the privilege of assuming the burdens of the White House.

As 1988 Republican candidate, Bush has pledged that if elected, he would install an administration more "gentle" and caring about social problems. He is prolife on abortion. In his autobiography, *Looking Forward*, Bush does not mention foreign assistance in general or population assistance in particular.

But during the period he was Ambassador to the United Nations during the early 1970s, Bush contributed the foreword to Phyllis Piotrow's *World Population Crisis: The United States Response* (1973), in which he paid tribute to such pioneers in the population assistance field as Alan Guttmacher and William H. Draper Jr.

"It is quite clear that one of the challenges of the 1970s, the Second United Nations Development Decade, will be to curb the world's fertility. We proceed by trial and error," wrote Bush at that time. "Will we learn fast enough from one another and with one another how to defuse the population bomb?" (In the past, moderate Republicans as a political subgroup have shown a lively interest in population issues rivaling that of any segment of the political spectrum.)

Democratic candidate Dukakis has stressed that his approach would be different from the current East-West contention that currently dominates the U.S.'s approach to international affairs. After college studies in Peru and later travels in Central and South America, Dukakis has evidenced a particular interest in Latin America and a belief in "process" and consensus among interested parties that, supporters say, he would apply to both domestic and international affairs. A prochoice advocate, Dukakis has specifically called for the renunciation of the 1984 "Mexico City policy," which currently prohibits U.S. funding for family planning through any group that advocates abortion.

"30 Million Jobs"

Campaign issues that have tangentially touched on population have, however, been a little less portentous than those mentioned above. The discussion about the Vietnam-era service of Bush's running mate Sen. Dan Quayle (R-Ind.) and his generation has highlighted the fact that of the 26.8 million males born between 1939 and 1954 who were of draft age sometime during the Vietnam era (the period between 1964 and 1975), a relatively small minority – about 2.2 million – served in the military and did tours in Vietnam. They were part of a larger group – 10.9 million – that served in the military. This group, which included 1 million National Guardsmen and Reservists, still constituted only 41 percent of all those in the draft-eligible ages. The substantial majority – 16 million – of the male Vietnam-era generation were never in uniform.

In the meantime, Vice President Bush in his nomination acceptance speech called for "30 million jobs in eight years" – a pledge subsequently admitted to be visionary rather than numerically literal. While immigration flow and employment patterns may change more than expected, at present the U.S. population 16 years and over is projected to grow by only about 13 million between now and 1996. Labor participation rates, which historically

Continued on next page

Population Issues

Continued from preceding page

have been rising, now include 65.3 percent of that population, as of 1986.

As of August 1988 there were 122,031,000 people in the labor force – i.e., those working or looking for work. Of these, 6.8 million were out of work, for an unemployment rate of 5.6 percent.

Thus, in order to fill 30 million new jobs between now and 1996, some combination of the following groups would have to go to work, in addition to the population's present workers: (a) all those presently unemployed; (b) all of the 13 million new people who necessarily will be joining the over-16 population because of the aging process; and (c) about 10 million of those over 16 who presently are not working or looking for jobs.

As a consequence of (c), the labor participation rate (those over 16 who have jobs or are looking for jobs) would rise five percentage points, to about 70 percent. To give some idea of how difficult raising participation is: Helped along by serious upheavals in the economy, household structure, and the role of women in the 1960s, 1970s, and 1980s, the 5-percentage-point rise up to today's 65 percent still took 15 years.

Future Population Issues

Whoever becomes president will face the usual plethora of standing problems. Immigration issues have not gone away with the passage into law of the 1986 Immigration Reform and Control Act. Population assistance is still a live issue (see "Washington Watch," page 4). Goals and levels of foreign aid – at a low ebb – remain unsettled. A new bill now before Congress, called the Global Poverty Reduction Act (HR4277 and S2454), aims to "develop a plan to ensure that the United States development assistance contributes measurably to eradicating the worst aspects of absolute poverty by the year 2000."

The bill's approach is to set goals and then allocate funds to achieve them. The goals are: lowering the under-5-years-of-age mortality rate to 70 deaths per 1,000 live births in the less developed world (the current rate is about 121); achieving a female literacy rate of 80 percent; and raising of living standards so that no nation has more than 20 percent of its population living in absolute poverty.

So far, the bill has 170 sponsors in the House and 17 in the Senate. Its chances of passage are considered remote, but its aims may be incorporated in the rewriting of the nearly-three-decade-old U.S. Foreign Assistance Act which is scheduled for next year.

– A.H.

WASHINGTON WATCH

Elections, campaigning, holidays, and fatigue are beginning to take their toll on the 100th Congress. Time is running out to complete the ambitious legislative agenda for 1988. Even with these pressures, however, the House and Senate have most of the appropriations bills in good shape as the end of the fiscal year approaches – Sept. 30. These include funding for international population assistance and domestic funding for demographic research.

International Population Assistance

The Senate passed its version of the Foreign Aid Appropriations bill this summer. The Senate bill includes $198 million for population development assistance – the same amount as in the House bill. The Senate also retained the provision that "none of the funds made available in this Act nor any unobligated balances from prior appropriations may be made available to any organization or program which, as determined by the President of the United States, supports or participates in the management of a program of coercive abortion or involuntary sterilization."

The Senate bill includes $40 million for International AIDS Prevention – a $5 million increase over the House bill – provided that $25.5 million go directly to the World Health Organization's program on AIDS.

Both the Senate and House bills include $500 million for continuation of the special Africa Fund. The Senate Bill, however, continues an attempt to earmark the funds within this special program by instructing the Agency for International Development to target the equivalent of 10 percent of the funds for each of the following: environment, health, and family planning.

Funding for Demographic Research

In August, House and Senate conferees worked out differences in their respective Appropriations bills for Labor, Health and Human Services, Education, and related agencies. One issue resolved concerned funding for Population Research Centers supported by the National Institute of Child Health and Human Development (NICHD) at the National Institutes of Health (NIH).

The final agreement was good news for the Population Centers – with one qualification. The conferees agreed to continue all centers up for renewal – this included three Population Research Centers, but the appropriations figure was not quite adequate to continue funding at current levels. The Centers will have to absorb a 10-15 percent cut, but even that is an improvement over the 17 percent cut negotiated with the Centers last year.

NICHD's Population Research Centers (inadvertently referred to as "Population Resource Center" in the July-August issue of *PT*) provide a core infrastructure for demographic research activities at eight universities and one specialized center at the Rand Corporation in Santa Monica, Calif.

– Nancy McConnell

Nancy McConnell is director of the Washington, D.C., office of the Population Resource Center. The Center monitors legislative issues of concern to the Population Association of America. Neither the Center nor the Association advocates any particular population policy but works to protect funding for qualtiy demographic research.

IRCA Aftermath

The Immigration Reform and Control Act of 1986 (IRCA) has drastically altered U.S. immigration policy. Its major provisions were designed to both regularize the status of undocumented immigrants and to deter future undocumented immigration.

May 4, 1988, marked the end of the first stage of the legalization process for individuals applying under the pre-1982 provisions (called I-687) of the Act. (See *PT*, June 1988.) By that date 1,760,793 individuals had filed applications. As of August 5, 1988, the Immigration and Naturalization Service (INS) reports that 740,675 individuals had already applied under the Special Agricultural Worker (SAW) provisions (called I-700). The deadline for I-700 applications is not until Nov. 30, 1988, and INS anticipates 850,000 persons may apply by the deadline.

The actual number of pre-1982 (I-687) applicants falls within the range of INS's low (1,342,000) and high (2,663,000) projections. For the agricultural workers, it was projected that 400,000 individuals would apply. The numbers as of July 22, 1988, exceed that calculation by more than 300,000. The INS has since increased its estimate to 850,000.

Summary statistics compiled as of July 22, 1988, tell a lot about the resident undocumented population. The figures that follow are estimates based on the cases already processed; it should be remembered there is a lag between the time of application and the time the data are available on the INS's Legalization Application Processing System (LAPS) due to the time needed to load and process completed applications.

Where Are They From?

The pre-1982 applicants are 55 percent male and 45 percent female, while the agricultural workers are 84 percent male and 16 percent female.

About 80 percent of the I-687 applicants entered without INS inspection and about 20 percent overstayed their nonimmigrant visas. (Information unavailable for SAWs.)

Applicants of both types are dis-

Continued on page 9

SURVEY REPORT

Ghana

World Bank Yosef Hadar

Child health needs are pressing in Ghana

About two-thirds of Ghana's women want either to limit or space births – important steps in bringing down the country's high total fertility rate of 6.4 children per woman.

That is the finding of the Ghana Demographic and Health Survey's 1988 report. Of the 4,488 women aged 15-49 years interviewed, 22.8 percent of the currently married women wanted no more children while 44.9 percent of them wanted them only after two years of spacing.

The survey also illustrated the different fertility intentions of husbands and wives. Only 19.2 percent of the husbands did not want more children, compared to 22.8 percent of currently married women. On the other hand, 22.6 percent of the husbands wanted more children within two years while only 19.5 percent of the women did. The married women also wanted to stop having children earlier than married men.

Although about three-quarters of the currently married women have heard of contraceptive methods (more familiar ones being the pill, female sterilization, and the condom), only 12.8 percent of them are currently using some type of contraception: 5.1 percent use modern methods while the remaining 7.7 percent use traditional methods. The most common modern methods being used are pills, followed by female sterilization.

Contraceptive use varies greatly depending on the place of residence and educational status. The level of use in urban areas is almost twice as high as the level in rural areas. Likewise, the percentage of married women currently contracepting is much higher in Greater Accra (27.2 percent) than in the Volta region (14.6 percent), and other regions (less than 12 percent). Married women with middle school and higher than middle school education are two and three times as likely to use contraception than those without education.

The survey also showed that there is a high incidence of diarrhea among children in Ghana (13.4 percent of children within 24 hours before the interview and 26.3 percent in the past two weeks) with only slight variation by the age of mother and urban/rural status.

Only one-third of the children surveyed had health cards. The children from the rural areas are less likely to receive second and third doses of DPT and polio vaccines.

About 55 percent of the women received prenatal care from trained midwives and nurses while only 28 percent received it from doctors. During delivery, about 33 percent of the women were assisted by trained midwives or nurses, 28 percent by traditional birth attendants, and 7 percent by doctors.

Although most urban respondents (73 percent) had access to piped water, only a small proportion of rural respondents (12 percent) received it. Likewise, 30 percent of the rural respondents did not have toilet facilities as against 13 percent of the urban respondents.

– Bhishna Nanda Bajracharya

Bhishna Nanda Bajracharya is at the East-West Population Institute, Honolulu, Hawaii.

DEMOGRAPHER'S PAGE

Mr. ZIP Delivers

by Judy C. Felt

An intangible lacework of grids crisscrosses the United States, dividing it into myriad geographic components – all of them created by humans and all invisible to the naked eye.

For example, we live and work in states, counties, and incorporated cities. We cast our ballots in precincts. We own or rent land which is separated by precisely surveyed legal boundaries and is probably part of a water or sewer district. Every 10 years we are counted by the Census Bureau, which has partitioned the entire nation according to its own system of smaller areas such as Minor Civil Divisions or census tracts.

But there are other unseen boundaries, unofficial ones, that have no legal or political purpose. Large companies divide us into marketing territories. Telephone companies subdivide the map into area codes, essential for long-distance calls.

The ZIP Code is one of the best known and ubiquitous of these unofficial grids. ZIP Code areas, per se, levy no taxes on their residents, send no representatives to Congress. But nearly everyone knows his or her own ZIP, and these postal code numbers are generally so much a part of daily routine that people take them for granted – but without knowing where they came from or where they're going.

Putting ZIP into Mail

ZIP (Zoning Improvement Plan) was created solely to expedite delivery of mail. It was implemented on July 1, 1963, by the then-Post Office Dept. (now the Postal Service) along with a new sorting and distribution system. This five-digit code can now be found on 98 percent of all first-class mail.

Throughout most of U.S. postal history, letters were sorted manually by postal clerks, first to the correct state or large city, then to various smaller cities or areas within the state as the letter inexorably neared its destination. But whereas in 1847 only six pieces of mail per capita were delivered annually, by 1960 this had reached over 347 pieces of mail per capita. In 1987 this figure was 635 per capita, for a total of 153.5 billion pieces of mail.

In the early 1960s the Post Office wanted to take advantage of the new automated data processing equipment and the sorting machines which were then being developed. For that it needed a universal code and thus the ZIP Code system was created.

Every ZIP designates several areas, nested within one another:

Data firms "bridge" demographic data with corresponding ZIP Codes

- The first number of the Code identifies one of 10 national geographical regions.
- The second and third numbers designate smaller geographical areas. Today there are over 900 three-digit numbers used to designate a Sectional Center Facility, a city, or a government facility.
- The last two digits designate a specific Post Office, station or branch within the three-digit area.

Approximately 42,131 ZIP Code numbers are currently in use (which means 57,869 are still in reserve awaiting assignment in the future). There are presently 40,000 post offices, stations, and branches serving approximately 100 million homes, farms, P.O. boxes, and business locations in the United States. Nearly 1.5 million new addresses are created each year. Since only a little over 38,000 Codes were originally assigned, the number has increased by only around four thousand since 1963.

When does an area merit its own ZIP? Population density and mail volume are the two principal factors. Nonetheless, a ZIP Code in a rural area may have only 10 to 15 families and a single carrier, while an urban Code could have more than 50,000 delivery points and 50 or more carriers. Many corporations and government facilities possess designated ZIP Code numbers because of the volume of mail handled for them. 00401, the lowest ZIP Code in the country, belongs to the Reader's Digest Association in New York; the highest, 99950, is assigned to Ketchikan, Alaska. The Pentagon alone has four ZIPs.

Targeting Markets

No sooner was the ZIP Code system implemented by the Post Office than businesses began using ZIP boundaries for their own commercial needs. ("Mr. ZIP," incidentally, is himself a refugee from a long-forgotten Chase Manhattan ad campaign.) Sales territories were divided according to ZIP Codes. One company which markets seeds by mail began using the Code to follow the frost line northward in order to reach customers when they were ready to plan their gardens.

But to be really useful for marketing purposes, ZIP Codes needed to be linked to demographic and economic information, so that companies could selectively mail their material to customers most likely to buy their product. Starting with the 1970 Census, the Census Bureau provided selected demographic characteristics by ZIP Code, down to five digits for metro areas and three digits for nonmetro areas. In 1980 the Census Bureau published information down to five digits for all areas of the country. Other government agencies, such as the Internal Revenue Service, also began releasing statistical information by ZIP Code. The Postal

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Service also periodically provides computer tapes which relate ZIP Codes to census tracts, but the tapes include no demographic data.

Several commercial data firms take the data provided by the Census Bureau, the IRS, and other sources and reorganize it into information for clients seeking specified target populations. They merge the various computer data bases and thereby combine, or "bridge," the demographic, social, and economic information available with the corresponding ZIP Code.

Utilizing such methods, commercial firms have put together packages identifying the locations of specific target groups in the population. These groups, called clusters, may have snappy marketing nicknames such as "Empty Nesters" which signify income, age, likely interests, and spending patterns. The ZIP Codes identified as having the highest percentage of residents with the preferred characteristics can then be gleaned from a larger mailing list, thereby cutting mailing costs and increasing the likelihood of a favorable response.

A wide variety of products and maps based on ZIP Codes are available from private data vendors; their prices vary depending upon the quantity and complexity of the data provided. The Postal Service itself plans to market detailed ZIP + 4 Code maps in the near future.

Ever-Changing Boundaries

Commercial-data users using ZIP to select a target population for marketing should exercise caution. A ZIP-Code-defined area can often be a very large geographic area in which thousands of people live, or it could be a single point to which mail is delivered to one company. Inhabitants of a ZIP often vary in social and demographic characteristics. In contrast, census tracts, as drawn by the Census Bureau, are designed to be relatively homogeneous in nature and for this reason have been more commonly used in marketing strategies.

Furthermore, unlike state boundaries, ZIP Codes are not a constant. They continually evolve to accommodate shifts in the handling and delivery needs of the postal system caused by changes in population size or real estate construction.

How do ZIP Code changes come about? Each letter carrier may have as many as 1,000 delivery points, and a ZIP Code can have from zero (yes, zero) to over 50 carriers. When the number of delivery points or volume of mail handled by a carrier nears the maximum, the carrier routes are modified, and more carriers may be added to that ZIP Code. When the number of carriers reaches a critical point, then adjustments in the ZIP Code boundaries, or assignment of new Codes, becomes necessary.

ZIP upheavals are predicted for Orlando, Jacksonville, and San Diego

Changes such as these happen on a continuing basis. They are usually initiated on a local level as increases in population density and mail volume make impacts on processing and delivery. As the growing need for change becomes obvious, the local Postmaster may appoint a committee, usually composed of local Postal Service management personnel, to study alternatives. Their recommendations, routed through administrative channels, are ultimately decided at Postal Service headquarters in Washington, D.C.

There, a group containing representatives from three offices (mail processing, mail delivery, and address information) reviews them and gives final approval. Many times changes are requested for political reasons; a wealthy neighborhood wishes to separate itself from a less affluent area by acquiring its own exclusive ZIP. (The same thing happens at the Office of Management and Budget, besieged by localities petitioning for their very own Metropolitan Statistical Area [MSA] designation.) Such requests for "vanity" changes, since they are not based on processing or delivery factors, are generally turned down.

Some 617 new ZIP Codes have been approved since April 1985. Some were boundary changes, others were new numbers taken from those in reserve. Over 200 of these changes occurred in Florida, where significant demographic growth prompted a major realignment in ZIP Code assignments in 1987.

Tampa, for instance, was assigned a new three-digit number which, when integrated with the two three-digit numbers already assigned, resulted in boundary changes affecting an estimated 1.5 million people. Similar ZIP-Code upheavals are predicted in the next few years for Orlando and Jacksonville, Fla., and San Diego, Calif.

An estimated 300 new Codes are taken from the reserve each year, but others are "retired" and put back into reserve when a local post office is closed (with a net annual increase of approximately 160 Codes per year over the last 25 years).

The Postal Service provides computer tapes on a monthly basis with current correct ZIP Codes, incorporating changes made during the previous month. This service is free of charge and allows data vendor firms to update the information packages that they sell. The same data base is also available monthly by carrier routes and by the new "enhanced" postal code ZIP + 4 Code (see below), but at present these tapes are used mainly by bulk mailers to update their mailing lists and to qualify for discount presorted rates.

And Now, ZIP + 4

As if ZIP Codes weren't enough, the ZIP + 4 Code (a euphemism for an optional nine-digit ZIP Code) was introduced in the early 1980s.

Continued next page

Mr. ZIP

Continued from preceding page

This latest refinement in numerical addressing is operational but is so far used by only mass mailers. ZIP+4 subdivides a ZIP Code into Segments, which could be one floor of an office building or one side of a residential street. If used by bulk mailers, the ZIP+4 reduces the time spent by the letter carrier in sorting, especially if the mail is presorted by ZIP+4 as well. There are cheaper rates to bulk mailers that presort to the ZIP+4 but, although many include the ZIP+4 number in the address, most still presort only by the 5-digit number.

The limited use of ZIP+4 may change when Postal Service bar coding – the curious tall and short bars printed on many business letters – becomes more widespread. Optical Character Readers (OCR) are now capable of reading the bottom line of a printed address. The more advanced OCRs can read four to six lines, consult a data base, and add a ZIP+4 code on the envelope even if only five digits were originally on the printed address. Once affixed with bar codes, an envelope can be sorted entirely by machine throughout the delivery process.

As demographic analysis becomes more refined, ZIP+4 also augers a not-too-distant era of micro-detailed marketing. The day may be coming when marketing is tailored to *truly* small areas – not just political subdivision, or even street, but ZIP+4 location – even, for that matter, individual telephone or modem or fax line. For in the final analysis, the whole purpose of ZIP Codes and the efforts detailed above is to make communications as efficient as possible.

A special thanks to the Library and staff of the U.S. Postal Service, Washington, DC, for assistance with information for this article.

References

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Chapman, John, "Cast a Critical Eye," American Demographics, Vol. 9, No.2 (February 1987) pp. 31-33.

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Coming Soon: Elderly America

Most people are aware that the U.S. population is aging. The extent of this demographic aging – and its consequences on the elderly themselves and on the social and economic fabric of the country – is the subject of "America's Elderly," PRB's latest *Bulletin*, written by Beth J. Soldo and Emily M. Agree.

About 1 out of 8 Americans is 65 years and over, and by 2030 the proportion is expected to be 1 out of 4. Given present projections of increases in life expectancy, by 2050, 5 percent of the U.S. may be 85 and over – the category presently considered the "oldest-old" of the population.

Although many people living longer are active and healthy well past retirement, the increase in the oldest-old – and the greater size of the 65-and-over group – is certain to cause greater concern about health-care funding. The vast majority – 95 percent – live in the community, not nursing homes. Those needing assistance generally receive help from family and friends.

The long-term outlook, however, requires difficult social choices. Government expenditures are three times greater for the U.S.'s elderly than for its children, raising the issue of "intergenerational equity," that is, allocating the amount of care society provides to those who have already contributed to it with the care to those who will contribute to it in the future. This kind of balancing-act decision – never easy in the best of cases – is made more difficult by the shifting proportions of the population's age components as the U.S. steadily ages.

Copies of "America's Elderly," by Beth J. Soldo and Emily M. Agree, the 52-page *Population Bulletin* (Vol. 43, No. 3, September 1988), can be ordered from PRB, Circulation Dept., PO Box 96152, Washington, DC 20090-6152, with checks payable to PRB. Prices are: $4.00 per single copy, 2-10 copies, $3.00 each, 11-50 copies, $2.50 each, over 50, $2.00 each. Orders for $50.00 or less must be prepaid and include $1.00 or 5 percent (whichever is greater) for postage and handling.

PRB Price Announcements

For the past four years PRB has managed to avoid any major adjustment in members' dues or in the price of its publications. Recent cost analysis, however, has revealed that PRB has been substantially subsidizing both materials sent to members and publications for general sale.

Although we are a nonprofit organization, one of our aims is to become as self-sustaining as possible in our efforts to disseminate important and objective information about world and U.S. population trends. Therefore we must increase membership dues and publication prices as of Jan. 1, 1989. An individual membership will rise to $45 a year. Annual cost for educators will be $30, for students $25, and for libraries $55.

Under this new plan, members will receive 11 *Population Todays*, four *Population Bulletins*, and the *World* and *U.S. Population Data Sheets*. Population Education materials, *Population Trends and Public Policy* papers, and other materials which we determined were of interest to a subset of our members could not cost-effectively be distributed to all; however, these publications will be available for purchase directly from PRB.

The good news is that you can take advantage of this early warning by renewing your membership before the end of the year, or by placing a publication order now, at current prices.

In January 1989, the price of a single *Population Bulletin* will increase to $7; *Population Trends and Public Policy* papers will be $5 each; World and U.S. Data Sheets will cost $3. In January, all members will receive a revised Publication Order Form with details of the new prices.

We would like to take this opportunity to thank you for your continuing support of PRB and its role of bringing demography to the forefront of policy debate around the world.

IRCA Aftermath

Continued from page 5

proportionately from Mexico. An estimated 70 percent (1,235,000) of the pre-1982 applicants and 83 percent (588,300) of the agricultural workers report Mexico as their country of citizenship. The second largest group are Salvadoran nationals who total 8 percent of the pre-1982 applicants, yet total less than 2 percent of the agricultural worker applications. Following citizens of El Salvador, the remainder of countries with more than 10,000 applications are citizens of: Guatemala, Colombia, the Philippines, Haiti, Nicaragua, Poland, the Dominican Republic, and Iran. Applicants from all other countries comprise about 11 percent of the total I-687 applicants.

The agricultural workers, also dominated by Mexican citizens with 83 percent of the applications, have a different distribution of country of citizenship. They are, in proportional order, citizens from: Haiti, India, El Salvador, Pakistan, Guatemala, Jamaica, and South Korea. Citizens from all other countries account for 5.1 percent of applicants.

Where Do They Live?

California was the residence of more than half (55 percent) of all pre-1982 applicants during the time of their application. About 18 percent of the pre-1982 applicants lived in Texas, 7 percent were in New York, 7 percent lived in Illinois, and 3 percent were living in Florida at the time they applied for legal status.

Of the agricultural workers who have applied so far, more than half of them (57 percent) also resided in California. Florida (11 percent), Texas (7 percent), Arizona (4 percent), New York (3 percent), Washington (3 percent) and Oregon (2 percent) are other states with more than 10,000 agricultural worker applications.

The LAPS statistics constitute the first available comprehensive data on the characteristics of undocumented persons living in the U.S. The INS plans to make a public user tape available after the processing of applications is completed.

– Audrey Singer

Audrey Singer is a PhD student in sociology at the Univ. of Texas at Austin.

SOFTWHERE

Census software: The U.S. Census Bureau has recently released their best seller, *The County and City Data Book 1988*, in an assortment of diskette versions.

The entire book is available on eight high-density IBM-compatible diskettes for $144. Detailed data organized by regions, counties, large cities, and small places are also available.

These files expand the utility of the data book, but do not replace it. Only the book includes the definitions, rankings, and other pertinent information used in analyzing the data.

The program has been simplified from previous attempts. The data can be browsed, selected, or combined with an accompanying free-of-charge utility program, and are easily imported into dBase or Lotus 1-2-3 files.

What a Deal! Dept.: To allow users to explore the usefulness of this product the Census Bureau offers a free sample diskette. Simply call Customer Services at 301-763-4100.

– D.L.

POPULATION UPDATE

Estimated United States Population:

As of June 1, 1988	245,898,000
As of June 1, 1987	243,711,000

The above estimates include armed forces overseas and are from U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1028.

Estimated World Population:

As of October 1988	5,150,000,000
Annual growth	89,000,000

Estimated by extrapolation from the mid-1988 population on PRB's *World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: May 1988

	12 months ending with May					
	Number		Rate			
Item	1988	1987	1988	1987	1986	1985
Live births	3,840,000	3,754,000	15.7	15.5	15.7	15.7
Deaths	2,168,000	2,099,000	8.9	8.7	8.7	8.8
Natural increase	1,672,000	1,655,000	6.8	6.8	7.0	6.9
Marriages	2,375,000	2,418,000	9.7	10.0	10.1	10.4
Divorces	1,166,000	1,156,000	4.8	4.8	4.9	4.9
Infant deaths	38,300	38,200	10.0	10.2	10.4	10.7
Population base (in millions)			244.3	242.1	239.8	237.1

Note. Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source. *Monthly Vital Statistics Report* (Vol. 37, No. 5) from the National Center for Health Statistics.

PRB's Workbook For Students

PRB's latest teaching tool, "World Population: Facts in Focus," is a workbook of practical learning exercises designed to accompany the *World Population Data Sheet*. The 20-page workbook offers a variety of exercises, ranging widely in rigor, that make it appropriate for use in junior high through college level courses.

The *1988 World Population Data Sheet* appears in 8½ x 11 inch page format in the center of the workbook for easy use by the reader. This four-page format has been popular in the past and was requested by many PRB members in last year's readership survey.

The variety of exercises in the workbook make it appropriate for use in social studies, geography, science, environmental studies, and mathematics courses. Some of the exercises call for simply finding information on the *Data Sheet* (a useful introduction to the *Data Sheet* and demographic terms), while others call for application of formulas, analysis of data, and data mapping.

The October issue of *Population Education Interchange* features a teacher's guide on ways to teach the workbook. (It also contains the answers to the workbook's exercises.) A map-and-chart quiz gives students a chance to demonstrate their ability to interpret a table of demographic data, as they match varying sets of mystery statistics with the correct country.

Included as well is the latest list of VHS videotapes acquired by PRB's Film Library. These tapes illuminate diverse population and environmental topics, and PRB offers them for rent to schools and groups.

–K.C.

Copies of the 20-page workbook, "World Population: Facts in Focus" with the accompanying teacher's guide, can be ordered from PRB, Circulation Dept., PO Box 96152, Washington, DC 20090-6152, with checks payable to PRB. Prices are: $2.00 per single copy; 2 or more copies $1.75 each. Orders for $50 or less must be prepaid and include $1.00 or 5 percent (whichever is greater) for postage and handling.

For a complete list of film library holdings, send a stamped self-addresses envelope to Film Libraries, PRB, Inc., 777 14th St., NW, Washington, DC 20005.

TAKE A NUMBER

Chicago Is... not growing very quickly, according to estimates and projections released by the city's Department of Planning. The projections offer an interesting glimpse into the demography of the country's third largest metro area since the 1980 Census. The city's population is projected to increase to just 3,033,000 by 1990, barely up from 3,005,000 at the 1980 Census. By 2010, the projections show a city population of 3,155,000. By ethnic group, blacks are expected to increase from 40 percent of the total in 1980 to 44 percent in 2010, while Hispanics rise from 14 to 24 percent, resulting in a city population over two-thirds "minority."

By contrast, New York City consisted of about 45 percent blacks and Hispanics in 1980. The report notes that the total fertility rate (TFR) in 1980 for non-Hispanic whites in Chicago was 1.5 lifetime births per woman in 1980, compared to 2.4 for blacks and 3.1 for Hispanics. The projections assume only a slight rise in white fertility, to a TFR of 1.6, a slight decrease for blacks to 2.2 , and some convergence of Hispanic fertility to 2.5. From 1980 to 1985, both whites and blacks are estimated to have had net-out migration from the city of 17,000 and 7,700, respectively while a modest net in-movement of 2,000 Hispanics occurred. A companion report for the Chicago metro area, using the older SMSA definition, interestingly enough, estimates that the area grew from 7,103,624 in 1980 to 7,274,500 by 1985, but that virtually all of that growth took place in the suburban counties.

–C.H.

ADDENDA

Tourist Tunnel Vision

This summer's hit comedy, *Coming to America*, concerns the prince of a mythical African country who undertakes a quest for an American bride – hence the quasi-migration title.

As they consult an enormous globe and examine the geographic sweep of the U.S., Eddie Murphy (the prince) and Arsenio Hall (his closest friend) are elated by their destination's fabled vastness.

"America!" exclaims Murphy.

"The land is so big, the choices so infinite," marvels Hall. "Where shall we go – Los Angeles or New York?"

Bruce McBroom

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CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in Current Readings. Publishers may address review copies to Book Review Editor, POPULATION TODAY, Population Reference Bureau, 777 14th St., N.W., Washington, D.C. 20005.

ADJUSTMENT WITH A HUMAN FACE: Protecting the Vulnerable and Promoting Growth, Vol. 1 (A Study by UNICEF), edited by Giovanni Andrea Cornia, Richard Jolly, and Frances Stewart. New York: Oxford, 1987. 319 pages. $45.00 cloth.

A world recession, depressed commodity prices, a debt crisis, and an African drought have combined to stagger the economies of the Third World. The international community and individual governments of the less developed countries have scrambled to adjust to the adverse economic circumstances. Most of the activity, however, is aimed at balancing accounts.

How do adjustment policies affect the poor? Volume I of a UNICEF study examines the question. Predictably, the book's 10 eminent contributors found that during the 1980-1985 period, conditions for most people at the bottom began to deteriorate. Child mortality, educational opportunities, employment, family income, and other measures amply demonstrate that hard times increased for many people already living in poverty.

By using case studies, the authors show, however, that Third World governments have dealt with the exigencies of adjustment with varying effectiveness. Despite negative growth rates, some governments have successfully intervened, at least on a short-term basis, to protect the poor.

"The issue, therefore, is not whether to adjust," the authors note, "but how." The book contends that "most programmes aimed at protecting the poor are relatively inexpensive in terms of total government expenditure and GDP."

The authors put forward a series of recommendations for alternative adjustment packages that protect people at the bottom while allowing for economic growth. "A major emphasis of adjustment with a human face is restructuring – i.e. the reallocation of resources to priority needs. This is clearly essential if the resources going to the vulnerable are to be protected and even increased at a time when resources are limited." Alas, social reforms are more easily recommended than implemented.

The authors recommend the establishment of monitoring systems in Third World nations. As they point out, the Food and Agriculture Organization's "early warning" system effectively identifies potential food shortages. If nothing else, a monitoring system, composed of data on income, nutrition, health, and other basic social considerations, would put political pressure on national governments and the international community to take remedial action.

The book concludes, "In the longer term, resumed economic growth is essential to permit protection and improvements in human conditions ...; outflows of resources from the Third World must be reversed, and terms of trade improved."

Adjustment with a Human Face is not a book to be judged by its cover – a picture of an undernourished child – or by its title; the book doesn't report on the human side of the adjustment process. It is, however, an extremely well-edited socioeconomic study and accessible to the layman. The book is highly recommended.

– Winthrop P. Carty

A SOCIAL AND ECONOMIC ATLAS OF INDIA, Delhi, India: Oxford University Press, 1988. (Contact Oxford University Press, New York, phone 1-201-796-8000.) 254 pages. $65.00. ISBN 0-19-562041-0.

A great value considering its sumptuousness, this 10 x 15 inch volume contains 246 multicolor maps and 365 charts displaying the geographic distribution of India's physical, demographic, agricultural, economic, and trade data. When readers desire greater precision, they can whip out the provided clear-plastic overlay and pinpoint the location of graphically displayed map data right down to the district level.

The India *Atlas* is primarily economic in focus, but it includes a number of population-related maps, mostly based on the 1981 Census. A profusion of worthwhile information between two covers, it is a worthy shelf companion for Oxford's *Population Atlas of China*, published earlier this year (see February 1988 *PT*).

– A.H.

Books Received

AMERICAN NEIGHBORHOODS AND RESIDENTIAL DIFFERENTIATION by Micheal J. White (The Population of the United States in the 1980s: A Census Monograph Series). New York: Russell Sage Foundation, 1987. 327 pages. $37.50 (cloth).

ANNUAL REVIEW OF POPULATION LAW (Volume 11) edited by Paul F. Mason. New York and Cambridge, Mass.: UNFPA and Harvard Law School Library, 1987. 613 pages.

BORN UNWANTED: Developmental Effects of Denied Abortion edited by H. P. David, Z. Dytrych, Z. Matejcek, and V. Schuller. New York: Springer, 1988. 143 pages. $26.95 (cloth).

THE BURDEN OF SUPPORT: Young Latinos in an Aging Society by David E. Hayes-Bautista, Werner O. Schink, and Jorge Chapa. Stanford, Calif.: Stanford University Press, 1988. 196 pages. $32.50 (cloth).

CIRCUMCISION OF WOMEN: A Strategy for Eradication by Olayinka Koso-Thomas. London: Zed Books, 1987. 109 pages (paper).

CLEARING THE AIR: Perspectives on Environmental Tobacco Smoke edited by Robert D. Tollison. Lexington, Mass.: Lexington Books, 1988. 148 pages. $27.50 (cloth).

RETURN TO AZTLAN: The Social Process of International Migration from Western Mexico edited by Douglas S. Massey, Rafel Alarcon, Jorge Durnad, and Humberto Gonzalez. Berkeley, Calif.: University of California Press, 1987. 335 pages. $37.50 (cloth).

REPUBLIC OF KOREA

Population (1988 est.): 42.6 million
Land area: 38,000 sq. miles
Births per 1,000 pop.: 19
Deaths per 1,000 pop.: 6
Rate of natural increase: 1.3 percent
Total fertility rate: 2.1
Infant mortality rate: 30 deaths per 1,000 infant deaths
Life expectancy at birth: 68
GNP per capita: $2,370
Capital: Seoul

by Wendy Patriquin

Host of the 1988 Summer Olympic Games, the Republic of Korea occupies the southern half of the Korean peninsula, with its only land border being along the Demilitarized Zone (DMZ) between North and South Korea. The people are racially, ethnically, and linguistically homogeneous, and there has not been a sizable minority since the Japanese left after World War II. The major population centers are in the Seoul-Inchon area of the northwest and in the fertile plains in the south. Seoul alone has a population of about 10 million. Buddhism and Shamanism are the major religions and because of missionary activity in the 19th century, there are about 4 million Christians.

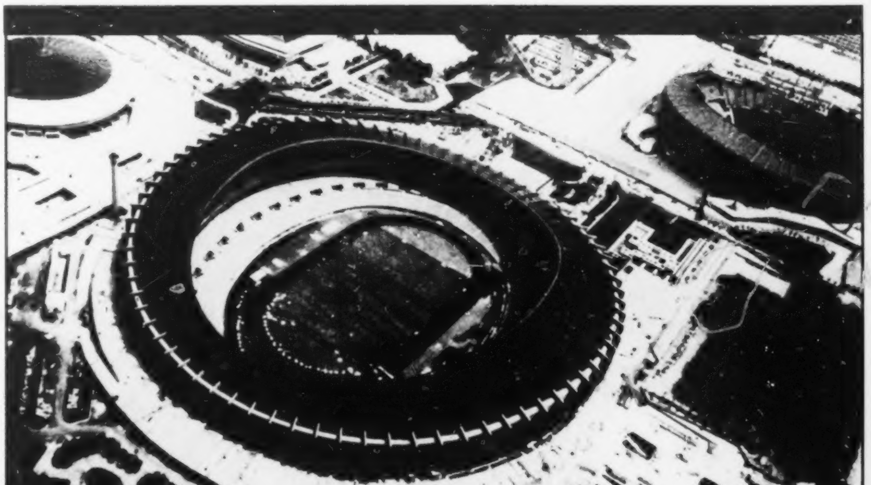
The peninsula was divided into communist and noncommunist countries after the defeat of the Japanese in 1945 (they controlled the territory from 1910-1945) under the rule of the Soviet Union and the United States, respectively. The Soviet Union's refusal to cooperate in the holding of nationwide elections under UN observation in 1948 prevented the reunification of the country, and separate governments were formed. Although each government considers the border between them merely an administrative line, the chances for reunification in the near future are slim.

The post-1948 political history of South Korea has been troubled, with strong leaders (Syngman Rhee, Park Chung Hee, Chun Doo Wha) establishing powerful regimes by using the apparatus of democratic government to neutralize or suppress dissent. In the 1987 presidential election, the opposition was able to mount a strong challenge for the first time.

With the rapid industrialization that has occurred in the last three decades, the cities have grown at an incredible pace. The economic growth resulting from this mushrooming industrial production has put the Republic of Korea among the list of newly industrialized countries (NICs), a new category between the less developed and more developed countries. As has happened in other countries with a growing economy, population growth has declined in Korea. In 1958 the annual rate of natural increase was 2.9 percent; by the early 1980s this figure had fallen to 1.7 percent. The small family norm is spreading though the population, with the number of children desired by women declining dramatically. According to the Korea Fertility Survey in 1976, for example, 94 percent of women surveyed in 1971 wanted 3 or more children, while in 1976 only 56 percent wanted 3 or more.

As far as contraception knowledge and practice are concerned, the oral pill was the most well-known method (by 84 percent of the women), followed by the IUD (79 percent), the condom (49 percent), surgical sterilization (35 percent), and the rhythm method (23 percent). However, only 44 percent of women were currently using one of these methods and 63 percent had ever used one of these methods.

The Republic of Korea has the potential to become a powerful player in the international marketplace, particularly in the fields of automobile design and assembly, electronics, and computers. No longer having to deal with basic population problems, the country will be able to continue its path of economic growth and development.



Information Office Korean Embassy

Seoul's stadium ready for Olympics.